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High performing mobile scalping solution developed for fines



Sandvik Construction Mobile Crushers and Screens is pleased to announce a new addition to its scalper range with the introduction of the NEW QE441 Free Flow. A versatile and highly efficient solution for

processing difficult to screen materials & products with high moisture contents.

Our new QE441 Free Flow provides you with a versatile and highly efficient mobile solution for handling sticky, moist and wet materials with a high percentage of fines. It is your ideal solution for processing materials such as soils, aggregates, ores, waste, biomass and other waste derived fuels including products with high moisture contents.

We have designed this unit based on the sturdy crusher-style chassis of our class leading QE441, combined with a highly productive and aggressive double deck Free Flow screen. The heavy duty scalping screen allows you to process large un-screened material on the rigid scalping top deck, whilst providing a fine screening solution on the dual motion lower deck. The powerful snapping of the bottom deck media generates an active "flip-flow" movement which generates a huge throw that propels material upwards and outwards separating material as it does so and thereby eliminates any plugging and blockages. This results in the processing of more sellable products and less waste.

The QE441 Free Flow has been designed with the same user-friendly features of our 1-Series screens. These include Sandvik's easy to use control system and user interface with sequential start, whilst two speed tracking will help to reduce travel time

between jobsites. The QE441 Free Flow offers increased plant durability and operator comfort, without sacrificing on performance.

With a large choice of screen media and a wide range of adjustable throws and speeds available, this enables the QE441 Free Flow to be configured to suit the specific requirements of the application. It compliments our Premium jaw crushers and Q1341 Prisec™ impact crusher and can also work as a stand-alone unit.

Key features of the QE441 Free Flow are:

- Heavy duty modular top deck scalping screen allows you to process large un-screened material, whilst a dual motion Free Flow screen separates fines and sticky material on the bottom deck.
- Free Flow lower deck featuring polyurethane mats generates a huge throw and eliminates plugging and blockages
- Aggressive Free Flow screen with wide range of adjustable throws and speeds enables the bottom deck to be tailored for numerous applications
- Highly efficient and easy-to-use electrical control system with colour coded numerical push buttons for ease of operation
- Heavy duty crusher-type chassis designed to accommodate interchangeable side conveyors and compatible for 2-way or 3-way split configurations
- Modular design screen box for easy replacement of screen media
- Feeder load sensing facility to prevent blockages and unnecessary downtime
- Capable of operating in the most hostile environments
- Massive stockpiling capability through integrated hydraulic conveyors
- Spacious and easily accessible hydraulically folding maintenance platforms
- Radio controlled two speed tracks fitted as standard



Key Specifications:

Screen Size	18' x 6' / 5.4m x 1.73m		
Engine	CAT C4.4 ACERT 96 kW / 129 hp		
Hopper Capacity	8.5 m³ / 11.1 yrd³		
Transport Length	16.33 m / 53' 7"	Working Length	16.82 m / 55' 2"
Transport Height	3.20 m / 10' 6"	Working Height	14.56 m / 47' 9"
Transport Width	3.50 m / 11' 6"	Working Width	4.68 m / 15' 4"
Weight (Standard)	37,070 kg / 81,725 lbs		

Note: All weights and dimensions are for standard units only

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Back from our travels...

Landing back at Gatwick my feet almost refused to move! Conexpo is a very big show and this year's edition on the face of it appeared to be very successful. Each day it got warmer and the visitors that bounced in every morning, crawled back out every afternoon. I can well imagine the hundreds of broken bodies each night after visiting this huge show in Las Vegas.

Held every 3 years in the gambling capital of the world this year's edition attracted a total attendance of 128,000 and a near endless array of heavy equipment across four huge lots and five conference halls, living up to its reputation as one of the world's largest gatherings of contractor professionals and the equipment that powers global heavy construction.

Completely on a different scale the PlantWorx show will be held on the 6-8th June at the Bruntingthorpe Proving Ground in Leicestershire. This show will be previewed in our May edition along with features on dump trucks and excavators, aggregate recycling and conveyors, elevators and feeders.

Hopefully this show will be a little easier on the feet....have fun!

John Edwards

Editor



Hub Digital Media Limited
27 OLD GLOUCESTER STREET, LONDON WC1N 3AX

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Sales & Advertising Enquiries:
+44 (0) 20 3637 0385

Global Sales Manager
David Roberts
david@hub-4.com

Editor
John Edwards
john@hub-4.com

Advertising Accounts Manager
Sophie Morgan
sophie.morgan@hub-4.com



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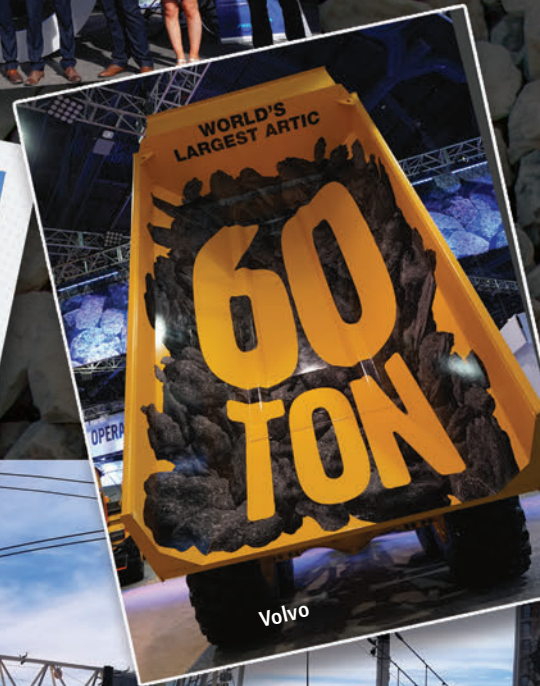
Terex Finlay



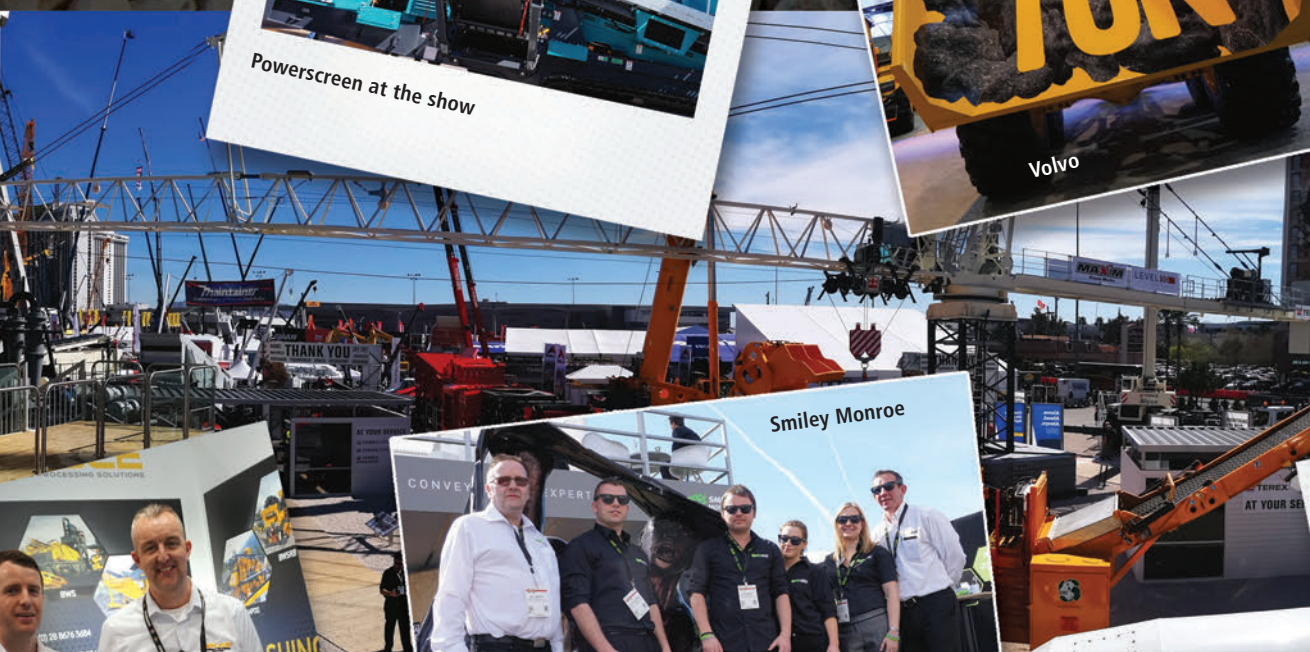
EDGE Innovate



Powerscreen at the show



Volvo



Bruce Engineering



Smiley Monroe



Haver & Boecker



Liebherr



TEREX Washing Systems



MB Crusher



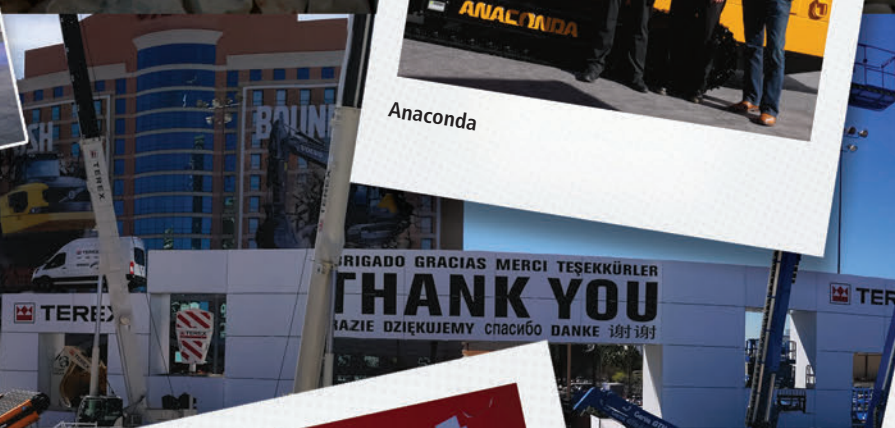
Terex Finlay Clients



Anaconda



McCloskey Washing Systems



Doosan Bobcat



CASE Press Conference



TEREX EcoTec



Corey Poppe of Superior Industries



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- **700** Wash Plants sold
- **4,100** TEREX Powerscreen Machine Sales

DUO Mineral Processing

- **100** Million tonnes of contracted material processed by DUO



The 700th plant being installed at Tarmac CRH - Kingsnorth

DUO involvement in major projects

- M25 final section, Radlett
- Channel Tunnel rail ballast and tunnel segment material
- Southampton Berth 109 rail ballast
- Heathrow Terminal 5 limestone washing material
- Viability of scalping washing - 10 million tonnes
- Foster Yeoman, Torr Works
- A1/M1 upgrade
- M40 Banbury
- M6 Toll road
- Amec Norway oil pipe line
- Rail ballast - Shap
- Dublin Tunnel
- AWPR Aberdeen by-pass
- IBA Processing Plants
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UK Mineral Extraction Industry launches consultation on UK Minerals Strategy

Facilitated by the CBI Minerals Group and the Mineral Products Association, the UK mineral extraction industry have launched a consultation which seeks stakeholder views on a proposed UK Minerals Strategy.

Minerals are essential to the economy and our way of life and represent the largest flow of materials in the UK. Minerals and mineral products underpin many sectors of the UK economy and are vital for many particularly construction and manufacturing. A strategy for minerals is important to meet the objectives of the Government's emerging UK Industrial Strategy and the National Infrastructure Delivery Plan. With over 5 billion tonnes being required over the next 25 years for the next generation, ensuring demand of this scale is supplied needs careful planning and management. To this end, it is important not just for the industrial sectors directly involved but for key stakeholders in planning authorities, regulatory and environmental organisations and others with an interest in mineral extraction throughout the UK.

The key priorities identified in the proposed strategy are:

- Ensuring an adequate and steady supply of UK minerals to meet demand
- Encouraging trade and export of UK minerals and reduce risks from international insecurity of supply
- Safeguarding both mineral resources and crucial transport infrastructure
- Mitigating impacts of extraction, processing and transportation
- Providing better information to support policy development
- Maintaining an up-to-date plan-led system
- Ensuring that health & safety remains a top priority
- Providing good quality career opportunities and meeting skills needs
- Improving public understanding of the need for minerals
- Encouraging innovation, research and development in the minerals sector
- Cutting and improving 'red tape' particularly in relation to planning and permitting

Commenting, Nigel Jackson, Chief Executive of the Mineral Products Association, said: "The UK mineral extraction industry has been developing proposals for a UK Minerals Strategy over recent years. Thinking has evolved as a result of a series of industry led 'Living with Minerals' conferences over many years, organised by the CBI Minerals Group. This has been supplemented by views that have come forward from more recent discussion with the UK Minerals Forum and dialogue at other industry events such as the MPA/RTPI conference in 2016. The primary focus of this work has been on ensuring that expected UK demand for minerals is met for the next generation. We are well aware that this is an ambitious task and the industry cannot ensure that objectives are achieved without engagement and understanding from all stakeholders. The industry is seeking feedback and responses to ensure that the future UK Minerals Strategy considers all relevant issues to make it credible and effective."

The UK Minerals Strategy also takes account of two previous documents 'The Future of our Minerals', published by the UK Minerals Forum (November 2014) and 'The UK Mineral Extraction Industry' published by the CBI Minerals Group (February 2016).

The UK Minerals Strategy consultation is open until 1st April. Please respond to Nigel Jackson at nigel.jackson@mineralproducts.org and Ken Hobden at ken.hobden@cbi.org.uk You can join the conversation via #UKMineralsStrategy



www.hub-4.com/directory/13448



Kiverco awarded ISO 9001 Certification



Kiverco are delighted to announce that they have been awarded the ISO 9001:2015 certification. It's a great achievement and shows the company's investment to increasing and maintaining levels of efficiency and productivity.

Kiverco has always prided itself on high levels of customer service and the quality of their recycling plants. This new certification reinforces this and demonstrates their full commitment to their customers.

Anne McKiver, Kiverco Director says, "We are extremely proud of our team, who have worked hard to achieve this. This certification demonstrates how each department within Kiverco is committed to quality and service - from design to delivery of the finished product."



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AI - Stoneycombe Quarry invest in a new Bundie Bowser



Aggregate Industries Stoneycombe quarry in Devon have recently purchased a new site tow AdBlue Bundie Bowser, fitted with a 12V pump, flowmeter, delivery hose and nozzle.

Mike Jones Tovey – Manager, already had a site towable, diesel Bundie Bowser and from previous experience knew the best option and quality of Bundie Bowsers.

After purchasing the 700 Litre, fully bunded, site towable bowser Mike Jones Tovey said "This gives us a practical, clean, simple way of transporting AdBlue to our equipment around the quarry."

Stoneycombe quarry purchased the bowser to use with a John Deere tractor (also supplied by Ace plant) to quickly hook up the bowser and tow it to where it needs to be.

Ace plant's AdBlue Bundie Bowsers come in many different forms, including towable and static versions. Static version can be transported using its fork pockets, lift points or loading shovel buckets. Towable versions of the bowser come in both road tow and site tow variations.

The AdBlue Bundies are an offshoot of Ace plant's normal diesel carrying Bundie Bowsers which have rapidly grown to offer a large selection of different styles of Bunded fuel bowsers. In the past few years the addition of the Diesel, AdBlue and Diesel/AdBlue options have allowed Ace plant to easily supply a bowser to suit specific site requirements.



www.hub-4.com/directory/7030

Leading Eddy Current Separator manufacturer Magnapower have launched the CMS - Compact Metal Separator

This combines the ECS and drum magnet plant with a heavy duty out feed conveyor to provide a simple installation for metal processing and separation. Ferrous and non-ferrous metals can either discharge directly into metal collection bins or metal discharge conveyors can be fitted if required.

The Magnapower ECS incorporates a high powered eccentric rotor to deliver maximum separating force into the metals whilst also allowing protection from damaging ferrous metals reaching the ECS belt. The unit is fully guarded and can be fitted with the control panel mounted to the framework if required.



The simplicity of the design allows the plant to be free standing and is suitable for indoor or outdoor use. The Magnapower unit has excellent reliability, is easy to service and separation is guaranteed by advanced product testing.

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Hanson contracts manager Ian Price, left, pictured on the A338 Bournemouth spur road upgrade project for Dorset Highways.

Hanson re-secures Dorset Highways contract

Hanson Contracting has re-secured its strategic partnership contract with Dorset Highways for maintenance of the county's road network. The agreement, which starts on April 1, 2017, has a potential duration of 10 years and a total value of more than £100 million.

Hanson has worked as the main supply contractor for Dorset Highways since 2002, laying over one million tonnes of asphalt and delivering high profile projects including the Olympic transport package in Weymouth, Swanage recycling centre and most recently the A338 Bournemouth spur road upgrade.

Andrew Martin, Dorset's service director for highways and emergency planning, said: "We are delighted to be able to extend our partnership arrangements with Hanson into a third

generation contract. We have worked successfully together for the last 15 years to deliver capital maintenance and highway improvement programme across the county.

"Hanson submitted a very attractive proposal in both price and quality and also put forward a number of exciting new initiatives which we are looking forward to developing and implementing as the contract progresses."

Hanson Contracting's major projects director Denis Curran said: "We are very pleased to be awarded this new partnership contract and to extend our collaborative working arrangements with Dorset County Council. We look forward to delivering a high quality highways service."

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Weir Minerals secures £3m contract to supply major expansion project at Turkish gold mine



Weir Minerals Europe is to supply a range of products worth more than £3.2m to support a major expansion project at one of Europe's largest gold mines.

Weir Minerals Europe is to provide equipment for Anagold Madencilik's Çöpler Gold Mine sulphide expansion project in Turkey. The scope of supply for pumps includes models from the renowned Geho® Heatbarrier range and the Warman® range, including MCRTM mill discharge pumps, AHTM pumps featuring WRT® impeller and throatbush combination, M, L and PC pumps, together with the AHF and the MF Froth handling designs. A total of 82 pumps will be supplied. The overall scope of supply includes five Enduron® heavy-duty dewatering screens and a Cavex® CVX TM 12-way cyclone cluster.

Weir Minerals Europe secured the supplier contracts from Amec Foster Wheeler, the engineering company appointed to manage the \$744m expansion project, which is expected to extend the life of the Çöpler mine by more than 20 years.

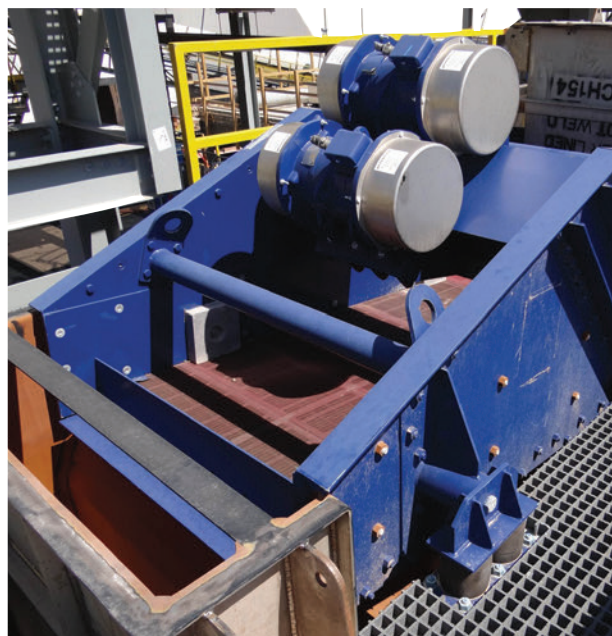
Carola Schulz, Sales & Marketing Director at Weir Mineral Europe, said: "We have a long-standing relationship with Anagold and have been working with the company at Çöpler since the mine opened in 2011. Indeed, we already have several of our Warman® pumps installed for various applications around the mine site. Our engineering expertise together with the wide range of world class products and dedicated, experienced service teams combine to offer some of the best equipment solutions for this high profile project. Going forward, this winning combination will help future operations at Çöpler's new, high-efficiency plant to be highly productive and profitable operating with equipment that delivers a lower cost of ownership."

"Weir Minerals' status as a large-scale engineering solutions provider means our products are used across the globe and have a proven track record in the mining industry.

"Our trusted technology and our products' durability provide long and trouble-free service, reducing the total cost of ownership."

Çöpler is an epithermal gold deposit located in central eastern Turkey, in the province of Erzincan, 340 miles from the capital

city, Ankara. It is an open pit mine producing gold from oxide ore. Construction of the mine started in 2009 and gold production began in 2011. Turkey is Europe's top gold producer and in 2015, Çöpler produced 204,665 ounces of gold.



The sulphur expansion project will enable the Çöpler facility to process 5,000 tonnes of sulphide ore a day. Mechanical completion of the project is due in the second quarter of 2018 and first gold production is expected in the third quarter of 2018.

John Ebbett, of Anagold, said: "Weir Minerals was able to bring together a range of different products and packages that addressed the key issues of longevity, capacity and efficiency of operations. Weir Minerals' products have an excellent reputation for reliability, and it's important that we are able to minimise downtime as we look to achieve high productivity levels when the new plant is commissioned, and for many years into the future."

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THE EVO-LINE FROM KLEEMANN

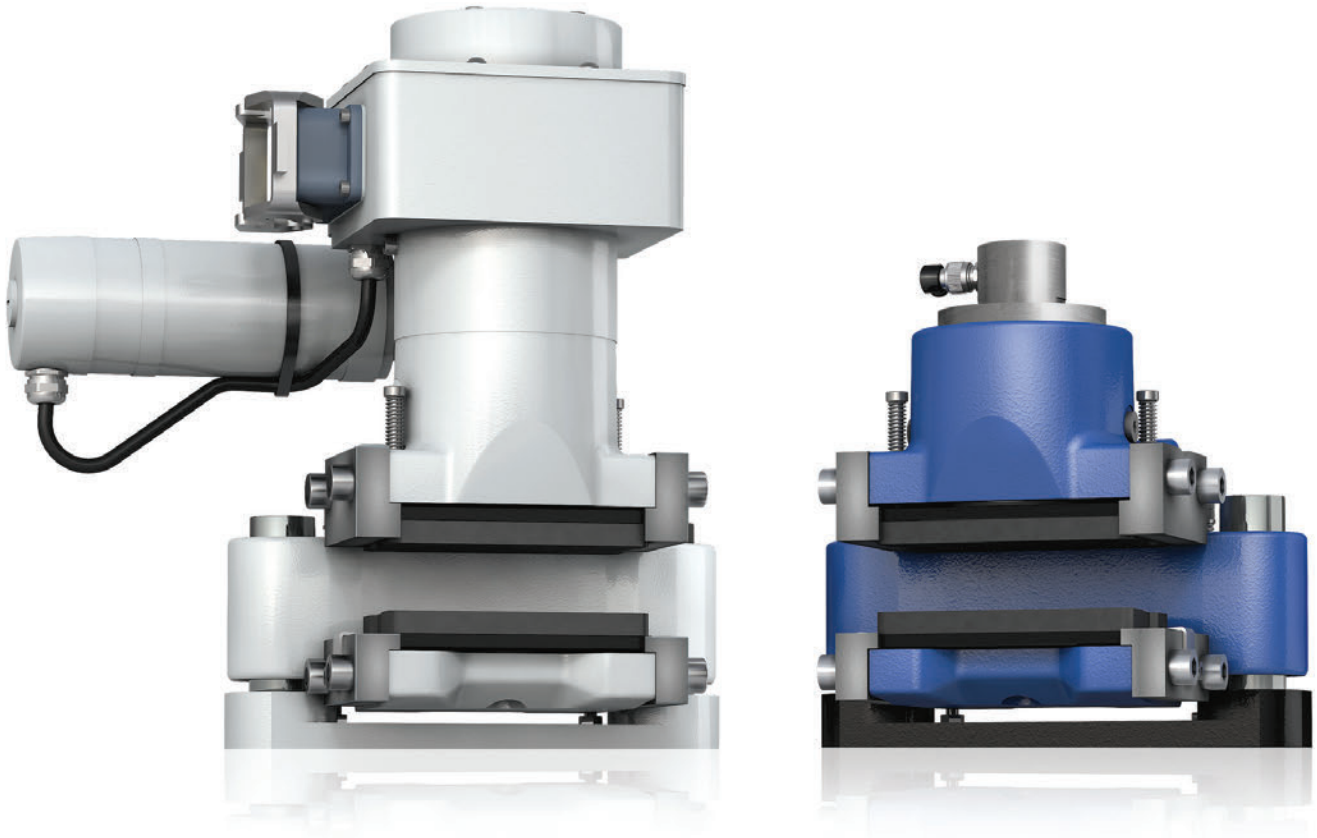


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IT'S ALL ABOUT EVOLUTION. The demands placed on plants in the contracting sector are high: maximum output matched with cost-effective operation - and all for the most diverse applications. This is exactly what distinguishes KLEEMANN EVO-Line plants. Thanks to highly innovative solutions, such as an advanced material flow concept, continuous control systems, outstanding safety concepts and many more, KLEEMANN's EVO-Line mobile jaw crushers, impact crushers and cone crushers deliver a solid plus in performance, efficiency and versatility. Progress calls for real innovation - the KLEEMANN EVO-Line.

 www.kleemann.info

New floating caliper brake with one-piece brake caliper



KTR have developed a floating caliper brake which is made of one single piece. The new XS series is optionally available with a hydraulic or electromechanical operating principle and can both be operated in an active and passive mode. The brakes are suitable for sub-zero applications with temperatures ranging down to -40 °C.

The brake caliper of the new XS series combines the housing, spacer plate, and counter plate as one piece and is made of special LT nodular iron. This makes the floating caliper brakes suitable for sub-zero applications with temperatures ranging down to -40 °C. All other components such as pad retainers, pistons and guide pins are made of steel. The brake pads are made of "organic mixture" or "sinter metal" and can easily be replaced by one single person. Depending on the application's preference and basic conditions, the XS brake can be operated either hydraulically or electromechanically, with clamping forces up to 15 kN being generated in the passive design and 16.5 kN in the active design. The brakes are mounted to the respective machine each by two screws size M16.

"Since the brake caliper of the new series is made of one piece, there are no more exposed contact surfaces", Fabian Liekam, Product Manager for Brake Systems in KTR explains. "In doing so we improved the brake's corrosion resistance. In addition, the one-piece design allowed us to extend the guide pins and double the number of bushings, improving the brake's floating operation and the efficiency of transmission of force from the caliper to the base plate. This makes the brake even stronger." The new floating caliper brakes series "XS" are intended for applications in the most demanding environmental conditions, both above or underground, onshore or offshore, and can be used both as service brakes, for high numbers of cycles, and as holding brakes.

The brakes are selected and adapted in the "KTR Competence Centre for Brake Systems" located in Schloß Holte-Stukenbrock/East Westphalia. At this location KTR pool their activities for brakes under the umbrella of KTR Brake Systems GmbH. Apart from developing and producing brake systems, tests and functional testing of prototypes and serial products are performed here as well. As an example, tests are performed on a universal brake test bench for rotor and yaw brakes, a tension test bench, a vibrating table or a cryogenic temperature cooling chamber allowing for tests with ambient temperatures down to - 40 °C.



www.hub-4.com/directory/8290

Over 100 brand new exhibitors commit to PLANTWORX 2017

The PLANTWORX Construction Machinery Exhibition returns to Bruntingthorpe Proving Ground, Leicestershire, from 6 -8 June 2017. The UK's Largest Working Construction Equipment Show, hosted by the CEA (Construction Equipment Association), will be the biggest event to date where visitors can expect to see the very latest in construction machinery and equipment innovation.

Every area of the construction machinery sector will be represented at the show including earthmoving machinery, lifting and access equipment, compaction kit, tools, rammers and hammers, compressors, attachments and much more.

To date PLANTWORX has over 320 confirmed exhibitors signed up for the event – this equates to over 90% sold. The 2017 event has attracted 104 new exhibitors to date who will be making their first appearance at PLANTWORX that's 33% – new exhibitors include attachment manufacturer Arden Equipment UK, Atlas Copco Construction and Mining, Mantis Cranes, tiltrotator manufacturer Rototilt UK, tool manufacturers Hilti (Gt. Britain) and Husqvarna Construction Products, MFG Ltd who is a designer and manufacturer of modular and bespoke excavation support systems and Italian attachment manufacturer Cangini Benne srl.

Axpan is a French manufacturer of micro machines specialising in earth moving equipment for tight and restricted access. According to the company the machines are targeted to professionals like landscapers, builders, groundwork operators and owner operators.



Axpan is making its first appearance at PLANTWORX 2017 on the Four Ashes Machinery stand (D24), the company's show debut coincides with the launch of two new models - the AX 36 Pro and the AX Loader.

Also new is Southern Plant Spares who will be showing the new range of Rhinox



Buckets (stand G45). Taking centre stage will be the UNI-TUSK X1 which combines a tooth and blade into one system with no sharp edges. This reduces the risk of penetrating underground cables and pipes. SPS claim that the large surface area of the UNI-TUSK X1 also increases the digging efficiency.

Because the UNI-TUSK X1 is designed like a sidecutter style tooth, it locks the side plates and the lip plate, increasing the structural integrity of the bucket.

Dale Record, marketing director, SPS said, "In recent times Utilities contractors have requested that all excavator buckets are supplied with the teeth removed to reduce the chance of cable strike. Whilst this does help save lives, it causes massive increase in wear to the bucket, causing a huge increase in maintenance costs for plant hire companies."

Mr Record added, "The Rhinox Uni-tusk X1 is a unique innovation which creates a combined Tooth and Blade system which not only protects the bucket and significantly increases the product lifetime, but it also reduces the likelihood of a cable strike due to its profile."

UK based, Niftylift is one of the largest manufacturers of mobile elevating work platforms in Europe – the company will be making its PLANTWORX debut.

One of the highlights on the Niftylift stand (F49) will be the new Nifty 120T. The Nifty 120T is a compact and manoeuvrable trailer-mount that can be towed easily by a small commercial vehicle or 4-by-4. With a 12.2m working height and 6.1m outreach, it utilises a telescopic upper boom to give up-and-over access to hard-to-reach locations, as well as low-level outreach where it's often needed most.

Tracking specialist AMI Group is also new to the show – the company has recently launched what it calls - a new state-of-the-art tracking device which provides personal protection for lone workers.

AMI's new Guardian Lone Worker tracking system is smaller than a standard car key fob and can be easily carried, placed on a lanyard or put on a keyring. Incorporating highly advanced GPS tracking, Guardian Lone Worker enables employers to maintain contact with their employees at all times, and also allows workers to raise an SOS alarm in the event of an emergency. It is ideal for use by employees who work in dangerous or isolated areas, or who are placed in high risk situations.

Peter Stockton, operations director of AMI Group said: "This is an exciting development as it allows employers to maintain contact with their colleagues at all times and can assist them in times of trouble. It's a very small, discreet device, but it's highly cost-effective and is packed full of features. Up to five telephone numbers can be entered to receive alerts when employees stray too far, fall or press the SOS button. Text alerts provide street locations and clickable Google map links; the device can even make and receive two-way voice calls. A great feature is that a huge range of alerts and functions can be customised to meet the needs of individual organisations."

A full exhibitor list and more information on the show can be found on the PLANTWORX website at www.plantworx.co.uk . Visitor registration is now open and it's free - visit <http://www.plantworx.co.uk/visit/register-for-your-ticket/>



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DUO achieve a triple mile STONE...

DUO (Europe) Plc has a history that dates to 1981 when Powerscreen® Washing Systems, an independent dealer in England and Wales for Powerscreen® aggregate washing equipment, was founded.



After establishing itself as a successful Powerscreen® dealer, Powerscreen Washing Systems rebranded in 2005 as DUO (Europe) Plc and today comprises of three main business areas; equipment sales, contract processing, and manufacturing.

Supporting their equipment sales, DUO also offer pre-used equipment and a comprehensive parts & service package.

DUO have within this time acquired an enviable reputation by constantly delivering to their portfolio of clients, many of which are blue-chip companies in the industry

Major involvement in high profile Rail, Air, Sea and Road Projects:

Within the last 35 years DUO have had major involvement in many high-profile infrastructure projects, including the Channel Tunnel, M25 at Radlett, Heathrow T5 and Southampton Berth 109 and including a 19 -year project to prove the viability of scalping washing; subsequently processing 10 million tonnes for Foster Yeoman at Torr Works.

- A1/M1 Wetherby/Peterborough upgrade
- M40 Banbury
- M6 Toll road CAMBA
- Amec Norway oil pipe line
- Rail ballast – Shap/Southampton/Isle of Grain
- Dublin Tunnel
- RMC Marine – Hull sand and gravel
- RMC Colchester Borrow Pits
- CEMEX Marine sand and gravel - Thames
- Tarmac Marine - Thames
- CEMEX crushed limestone rock fines
- CEMEX gritstone – Wales
- CEMEX granite – Cumbria
- Tarmac CRH - sand and gravel
- Aggregate Industries - sand and gravel
- Dublin Tunnel arisings to type 1
- Aberdeen By-Pass



The 700th plant being installed at Tarmac CRH – Kingsnorth

A Triple Mile Stone:

In this period the company has achieved a triple mile stone with DUO Equipment selling 700 Wash Plants; with the 700th machine being installed for Tarmac CRH at Kingsnorth in February 2017.

DUO Equipment also achieved a further milestone, selling more than 4,100 Powerscreen® machines.

DUO Mineral Processing meanwhile also achieved a third milestone by processing 100 million tonnes of contracted material.

Alex Moss, commented, "I'm very proud of the team and what we have achieved since the inception of DUO in 2005. We market all our brands and services in a very competitive market. Time and time again we have proved the integrity, efficiency and quality of the DUO brand, these are huge milestones for us and the industry."

Materials Processing - Knowledge, Ability, Flexibility and Market Reputation: DUO Mineral Processing are market leaders in unit-cost material processing providers for full aggregate production and offer a comprehensive and tailored unit cost processing operation.

Since inception the ethos of the DUO Group has been 'Two Working as One' and firmly believe a team partnership with their customers is vital to ensure they meet their needs.

With over 25 years-experience in aggregate production DUO Mineral Processing are well versed in the challenges that arise and with their extensive experience, they have developed their own 'best practice' to minimise risk and overcome any issues.

Aberdeen by-pass project:

Of considerable note the Minerals Processing Division have recently achieved a landmark in processing on the Aberdeen by-pass. Operating in six locations along the 58 kilometres of the by-pass, a fleet of TEREX® Powerscreen Crushing & Screening equipment has processed 4 million tonnes of granite since the operation commenced in June 2015.

Luke Talbot – MD of DUO (Europe) plc, commented, "Working as one with our client AWPR we specifically built in flexibility within the extensive programme which has allowed us to successfully manage any production changes that have occurred. We are very pleased to have achieved this landmark of processing with TEREX® Powerscreen equipment."

The Balmedie to Tipperty section is scheduled to open by Spring 2017 with the remainder for completion at the end of 2017. The new by-pass will link the A90 at Stonehaven and Charleston, south of Aberdeen and Blackdog to the north. When complete, the new road is expected to carry more than 43,000 vehicles each day through its busiest sections.

Why DUO Materials Processing?

Duo are material processing technicians who supply solutions. With no capital investment in equipment required, unit cost processing provides a more economic option for short-term projects.

There are various options that DUO can offer which include either the supply of processing plant only, or full project management, including an operating team. Unit cost processing is calculated on a fixed price-per-ton basis for finished material – meaning no surprise costs and ensures accurate financial planning.

DUO take responsibility for the supply of 'in specification' material and provide full flexibility; should requirements change, the equipment specification can be amended with the price adjusted accordingly.

Knowledge, ability and equipment:

The whole team at DUO, including office and site-based professional engineers are familiar with the range of plant required and all the relevant processes enabling them to fulfil the expectations of the project.

As UK dealers DUO only utilise high-specification equipment supplied by industry leading manufacturers such as TEREX® and Powerscreen®, ensuring a high-quality product is produced. Additionally, as UK dealers for two world-leading brands we are fully supported by our own Spares and Service Division who are dedicated to minimising your downtime and maximising your turnover.

The division has been involved in many projects, including:

- **Hanson** – Sand & Gravel Washing - Coln Quarry
- **Aggregate Industries** - Sand & Gravel Washing – Warmwell
- **Tarmac CRH** - Sand & Gravel Washing – Stanninghall and Barham
- **Frimstone** - Sand & Gravel Washing – Waterbeach
- **CEMEX** – Crushing & Screening – Shap and Roan Edge

Bulk Materials Handling:

With over 40 years of experience in designing and manufacturing products for the materials handling and waste recycling industries DUO Manufacturing is situated on the rolling Mendip hills, between Shepton Mallet & Frome, Somerset.





Cemex Dagenham



Day Aggregates Crawley

The manufacturing division offer customised design solutions, which although unique to your needs, provide a high-quality build, incorporating the maximum amount of operating efficiency combined with low-level maintenance requirements.

DUO Manufacturing provide a complete package from initial design to manufacture, installation and full project support all of which is delivered by working to the highest levels of safety.

The division has been involved in many high-profile projects, including:

- **Day Aggregates** - BDU Material Handling – Tolworth
- **Day Aggregates** - BDU Material Handling – Purley
- **London Concrete** - BDU Material Handling – Hornsey
- **Raymond Brown** - IBA Processing Plant – Ardley
- **Raymond Brown** - IBA Processing Plant – Barton Stacey
- **CEMEX** - Ship to Shore discharging system – Dagenham
- **Tarmac CRH** - BDU Material Handling – Paddington
- **Aggregate Industries** - BDU Material Handling – Sheffield

Dudley Lloyd – Director - Duo Manufacturing, commented, "For example, installation of the ship to shore and the barge loading conveyors at Dagenham was not a straight forward job for us as we were required to design and manufacture the conveyor gantry sections so that they landed exactly on the existing concrete pontoons, all of which was completed satisfactorily."

DUO Africa:

DUO Africa is the official Powerscreen® and Terex representative selling equipment and support across the African region providing a comprehensive package, offering individual plant options to bespoke design and turnkey operations.

A Ghanaian based company with extensive experience in the industry DUO Africa provide equipment from their stock of Powerscreen® and Terex spares and have a team of highly experienced service engineers who can provide a full maintenance and after sales package which includes on-site support.

Since inception DUO Africa has an impressive portfolio of multiple washing, crushing and screening projects; offering a 'one destination shop' for the quarrying, recycling and mining sector.



Pathway 18:

Time stands still for no man and with Pathway 18 in full swing, DUO (Europe) plc look forward to more challenges in the next 18 months: processing, washing, crushing and designing and building high-quality bulk handling plants of epic proportions, all designed for efficiency and the ability to produce a first-class end product.



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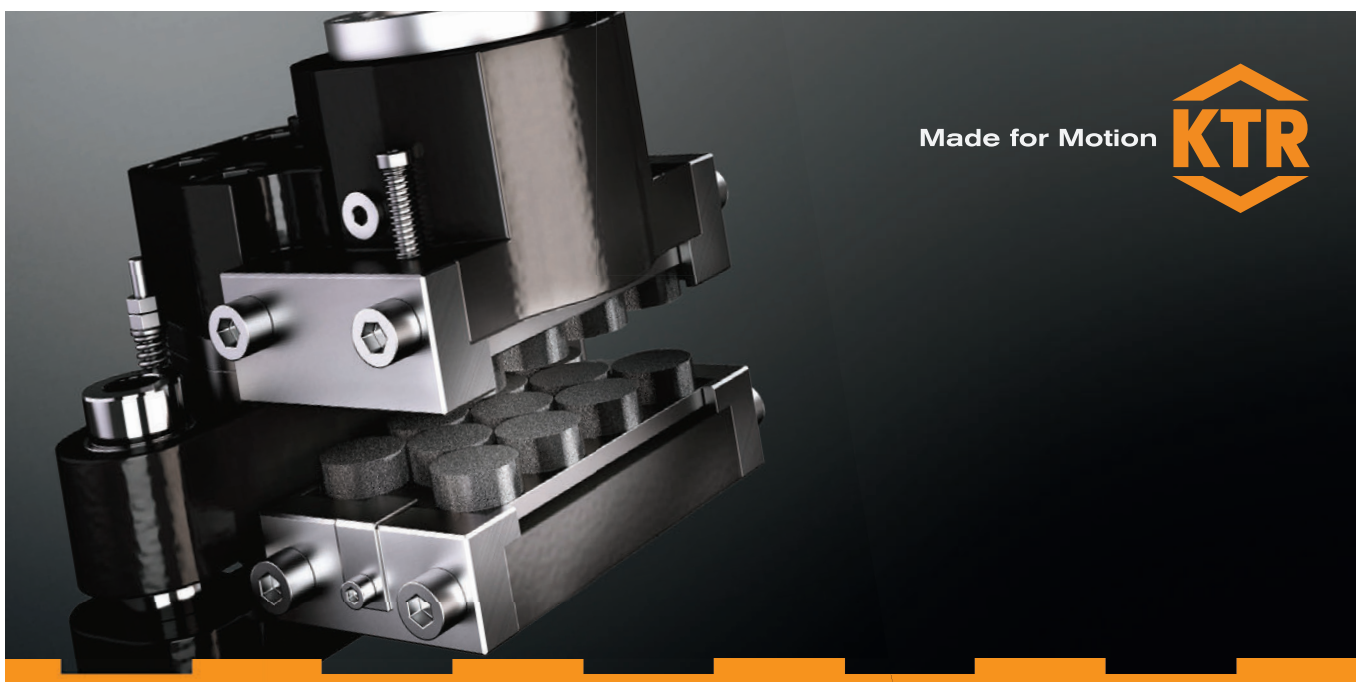
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Finlay Group's milestone machine for Thomas Armstrong Group



The Thomas Armstrong Group has taken delivery of its 25th Terex Finlay machine from Finlay Plant Northern.



Martyn Cueto and Charlie Nairn

A new Terex Finlay 390 Hydrascreen is the latest addition to the fleet, which is being used by the Group to process sand at its Overby Quarry site in Wigton, Cumbria - one of the two sand quarries the company operates in the north west.

In a partnership spanning 35 years, The Thomas Armstrong Group has worked closely with Finlay Plant Northern – part of the Finlay Group of companies – to introduce the best plant on site geared up to their exact needs.

The Thomas Armstrong Group has over 180 years' experience in construction services and the manufacture of building products and Martyn Cueto, the Group's quarry manager, says that the reason the company keeps going back to Finlay Plant Northern is based on the top-quality products and service they receive.

Martyn said: "The machines we've had from Finlay Plant Northern are great, some of them now are over 15 years old and they're still in operation, seven days a week, 10 hours a day.

"And the new Terex Finlay 390 Hydrascreen is no exception to that, it's cost effective to run, boasts a simple process and can work in confined spaces.

"The back-up and service is also fantastic, with parts we need being delivered the next day."

With an extremely fuel efficient diesel-hydraulic system, the 390 has a large capacity 14ft loading hopper and a remote-controlled tipping reject grid.

Featuring a robust 12'x5' screen box on every deck, it is processing 110 tonnes of sand from the quarry an hour, producing two different products.

The first, an oversize product, is fed to a washing plant to create a single sized aggregate and the second is a 3mm top-quality natural plastering sand.

The sand and aggregates produced at the Overby Quarry are sold to builders' merchants across the north of the country.

Charlie Nairn, managing director of Finlay Plant Northern, said: "Thomas Armstrong's don't require a three-way split for this application so the Terex Finlay 390 Hydrascreen is the perfect solution for them.

"The screen box can be set at variable amplitudes and screen angles, meaning it has the capability to process sand to an accurate size, ideal for what it's required to do at the Overby Quarry.

"It's marvelous to see companies such as Thomas Armstrong's reaping the benefits of these powerhouse machines."

To see the Terex Finlay 390 Hydrascreen in action visit:

<https://www.youtube.com/watch?v=U0GJp0tFerA>

Canning supply overland conveyor system for Sibelco at Godstone

Owned and operated by Sibelco, sand extraction and processing operations have been carried out in the area for 50 years; the operations cover three quarries adjacent to each other running from east to west.

Sibelco was founded in 1872, initially supplying silica sand from deposits in Flanders to Belgium's major glass producers. Its association with the clay industry stretches back even further, with their UK operations producing world-renowned ball clay in the south west of England for over 300 years.

Today, Sibelco supplies a vast portfolio of specialist minerals for use in a wide range of industries and applications. At Godstone, which is one of the company's newer operations, the deposit (Lower Greensand Folkstone Beds are to be found under the North Sea) consists of industrial silica sand which is suitable for specialist end uses such as glass and sodium silicate manufacture. The coarser or finer co-products are sold into the sports, equestrian and horticultural markets with building sand forming no more than 20 per cent of the output. Minerals are currently being extracted at a rate of up to 600,000tpa to 2m above the groundwater table.

The history of sand quarrying in the area is quite prolific dating back to the middle ages when the sand was mined under Reigate. The current processing operation at Godstone is being dug in three areas – North Park Quarry, The Horseshoe and Pendell Quarry with restoration on-going when an area has expired.

Glynn Roberts – Quarry Manager, commented, "all our sand is sold to either other Sibelco operations, bagging plants and/or companies throughout the UK as demand is high as our end products are of a very high quality.

The conveyor system:

Located in the Vale of Holmesdale under the North Downs the installation of the conveyor system not only had to take into consideration public footpaths through the renowned beauty spot, but also cross a main road en-route to the washplant.

The decision to install a conveyor system was made because of the effectiveness of the transportation of the sand and gravel by conveyor, against the alternative of loading dump trucks with the consequent negative effects on the environment in terms of noise and pollution.

Having researched the market for a suitable manufacturer, Canning Conveyor was invited to tender for the complete project and was subsequently successful in their bid to design, manufacture and install a complete conveyor system which is just under 2 miles in length.

The system is designed to accept up to 350tph of -150mm of sand and gravel.

Dug material is deposited into the hopper/feeder by loading shovel which feeds onto a 290m long x 750mm wide troughed belt conveyor C3. This conveyor includes a Canning 'SuperDrive' jib head powered by a single drum motorised drive fitted with ceramic lagging. Built on a substantial frame the unit consists of a discharge drum, primary and



secondary belt scrapers and a discharge chute with integral crash box and inspection hatch. Material from this conveyor is fed by a cantilevered jib discharge onto the second conveyor C2 angled at 90° to conveyor C3; this is 275m long and again includes a Canning 'SuperDrive' jib head driven by a single drum motorised drive drum fitted with ceramic lagging and specification as conveyor C3.

At the end of conveyor C2 the system turns 90° onto the final 1200m long conveyor C1 which elevates to a rise of 20m crossing over a road by a lattice bridge (by others) before dropping back down by approximately 20m, en-route to the stockpile.

This conveyor also includes a Canning 'SuperDrive' jib head driven by a double-drum motorised drive drum fitted with ceramic lagging with a specification as previous; conveyor C1 also includes a single idler belt weigher fitted into the head unit with a local digital readout.

At the end of conveyor C1 material is then fed onto a 38m long radial stockpile of lattice frame construction which elevates at approximately 15° before discharging onto a 10m high kidney shaped stockpile to ground, 180° radius.

The whole system includes a full length Davis Derby emergency stop pull wire system mounted on both sides and plastisol coated curved corrugated steel covers.

The specification also includes Canning intermediate bays consisting of high density polymer suspended idler sets and parallel return rollers.

The whole system was installed and commissioned by Canning engineers within the allotted schedule.

Glynn, further commented, "It's a very important asset for us, so the quality of build and the reliability of the system was very important and although I wasn't present when the system was installed it has operated without issues since installation."



Canning 'SuperDrive'

As well as being accepted as the market leader the Canning 'SuperDrive' jib head provides the confidence of a three-year warranty and is supplied ready filled with synthetic oil and requires no maintenance other than the recommended oil change. With normal oil a change is required every 10,000 hours and oil seal change every 30,000 hours giving almost 5 years between oil changes based on an 8-hour day working week. However, by using synthetic oil in this application the service life between oil changes has been increased to 30,000 hours or 14 years.



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RUD BULKOS Apron Conveyor Systems for Bulk Materials Handling

RUD conveyor and drive systems offer a range of product solutions to the bulk materials industry: Their robust conveyors consist of scraper conveyors; drag chain conveyors, screw conveyors and apron feeders.

The transportation of bulk materials is a major challenge to ensure the availability of building materials when they are needed. System availability and reliability are often overlooked and quick solutions are used which only secure limited success.

RUD BULKOS Apron Feeders are extremely robust and based on RUD's round steel link chain which acts as a pulling element and is driven by pocket wheels. The Apron Feeder

offers a range of advantages to the user and goods being conveyed. Its robust, yet simple construction offers a lower height due to smaller diameter wheels.

The Apron Feeder offers a closed plate cover which helps the chains remain clean during operation therefore minimising wear and tear. The round link steel chain used is also self-cleaning and works well in wet, corrosive and dirty environments.

BULKOS Apron feeders have been used across a range of market segments from power stations, mining, iron and steel works, tunnel construction, quarrying, recycling and the cement industry to name a few.



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Innovative conveyor belt cleaner program extends replacement

A global manufacturer of conveyor belt cleaning technologies has announced the introduction of a factory-direct program to deliver fresh replacement polyurethane blades - accurately specified, custom-fitted and installed free of charge. Building on the highly successful network introduced in the USA, the Mr. Blade UK program will allow Martin Engineering to maintain an electronic record of operating conditions on all conveyors using its equipment. This data will be updated regularly, providing customer management with an operational assessment of vital components, including recommendations for avoiding costly failures and system downtime.

Further, certified Martin service technicians will adjust, repair or replace the main frame and tensioner of any belt cleaner at no charge, for as long as the customer maintains a Mr. Blade service relationship. The company ensures customer satisfaction on any cleaner with its exclusive Forever Guarantee, which specifies that users will experience better cleaning, longer service life and lower cost of ownership.

"The idea behind the Mr. Blade program is to deliver an unequalled level of service using highly efficient, regionalized systems," explained Chris Schmelzer, Director of the Wear Components Business Group. "This first UK van will be targeting the Midlands Area including Leicestershire, Nottinghamshire, Derbyshire and South Yorkshire where there's a high concentration of aggregate producers, cement plants and other users of belt cleaners. With this type of system, we're in a position to be able to deliver proactive service in advance of a breakdown, replacing worn or failing components before they lead to an event that stops production."

The Mr. Blade UK program is based on a central warehouse approach, a home base from which the vans can be at virtually any customer within an hour or two. Cutting and milling of blades to suit any application will be handled at the warehouse location, with final adjustments and custom-fitting on-site. "Our technicians will still make frequent customer visits and perform Walk-the-Belt™ inspections to collect



MSHA-certified technicians will also adjust, repair or replace the main frame and tensioner of any belt cleaner at no charge.

operational data," Schmelzer continued. "But now we're also capturing very detailed info as to how the products are performing, which allows us to even better anticipate customer needs and maintain all belt cleaners in optimum condition."

Schmelzer said that "Eliminating the need to stock replacement blades is a relief to most managers, and with this programme they can do that and still obtain fresh blades which deliver optimum performance. Shifting that responsibility to a trusted vendor through this kind of service relationship is one way that bulk handlers can continue to streamline their operations, while obtaining better cleaning efficiency and safety at the same time. Customers can be confident that the blade and assembly are being serviced properly, ensuring maximised benefit from their belt cleaners."

The vans are designed as mobile business units, with technicians able to electronically enter and update data on each customer system right at the site. With a lifetime record of all belt cleaning equipment, customers will have access to details on the mounting assembly, tensioner and blade wear life, along with total annual cost information for budgeting purposes. Each vehicle will be equipped with the business tools and software to provide quotations on the spot, and all will have credit card transaction capabilities to deliver a convenient customer experience.

Martin Engineering has also established a regional version of the program in Brazil, and plans are already in the works for Mr. Blade China. "It's an approach that makes a lot of sense, both for the customer and for us," Schmelzer added. "This programme has allowed us to boost customer service to a new level, using a variety of tools and technologies to maximize system efficiency and minimise unscheduled downtime."

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The factory-direct program delivers replacement conveyor belt cleaner blades -- installed free.

Steely determination brings success for JJ Bullen

It's not often you come across a business success story as genuinely remarkable and inspirational as that of JJ Bullen - the latest Hardox Wearparts Centre in the UK. The story behind the company's rise from tragedy to triumph is testament to the determination of its young Managing Director, Robert Bullen.

Reputation

Based in Ormskirk, Lancashire, JJ Bullen Plant & Equipment Ltd offers a wide range of engineering services using Hardox wearparts to the construction, quarrying and recycling sectors. It was originally founded in 1982 as a plant hire business by Robert's father, John Bullen. Over the years, the company had developed a very good reputation and Robert was committed to a career in engineering and at the age of 16, he started an apprenticeship with a major UK crane company. However, just a year later, tragedy struck the firm and the family when his father died. While Robert completed his apprenticeship, JJ Bullen was forced to downsize significantly. However, Robert was determined to take the company in a new direction that would combine its excellent reputation in the plant world with his engineering skills and training.

Focus

In 2007, at the start of the worst economic downturn in recent memory, and at a time when the construction sector was in freefall, Robert took over the business when he was still just a teenager. From then on, he decided that JJ Bullen would focus on high quality repair of wear parts for recycling, quarrying, mining and construction.

Initially, Robert had no premises of his own and used one vehicle to carry out repairs at customers' sites. Despite the recession, when a big local competitor went under, Robert bought much of the equipment and took on five of the staff despite not having enough work for them at the time. What he did have was confidence that the business would grow and took his opportunity to invest – a spirit of entrepreneurship that has since paid off in spades.

Today, JJ Bullen has a fleet of 14 mobile units, its own premises, national and global coverage and an excellent reputation for quality and service. Turnover has grown from £300,000 to £2 million in the last three years alone.

Hardox quality

Although still only in his twenties, Robert now employs 22 engineers and 5 office staff. In 2014, JJ Bullen was nominated to become a Hardox Wearparts Centre, another major step on the road of the company's success story.

Over the past seven years, Robert Bullen has ploughed all of his profits back into the business, investing in new equipment and machinery and expanding his workshop facilities. This investment and the unrivalled quality of Hardox steel have played an important role in JJ Bullen's success story.



Tom Canavan, Hardox Wearparts Manager with Robert Bullen, Managing Director



One of the fully loaded on-site van workshops





Even before becoming a Hardox Wearparts Centre, Robert says that JJ Bullen was committed to using Hardox. "Quality has always been vital to our business and we are delighted that we can now guarantee to customers that they will have Hardox wear parts on every repair and replacement part we deliver. Hardox is the absolute best wear plate, full stop. The plate is always clean, dimensionally straight and very tough for the recycling, quarrying, construction and plant market."

Services

JJ Bullen offers a full range of engineering services both at customer's own sites and from its fully equipped workshops. Services include repairs and refurbishment of buckets, grabs, booms and dippers – all using Hardox wear plate and Weldox high strength steel – as well as the complete bespoke manufacture of new Hardox buckets. Equipment includes rolls that can take up to 3.6m wide steel in 25mm thickness, 2 profile cutters, 2 boring machines, 4 lathes, 3 drills, several plasma cutters, and milling machines.

Plant repairs, maintenance and sales are still an important part of the business – including repair of hydraulic rams, pumps and motors. The highly trained staff carry out safety inspections and certification of plant and attachments. The company can also make alterations and manufacture parts to suit specific customer requirements. JJ Bullen also offers precision in-line boring, horizontal boring and welding – and from the original welding machine when Robert took over – there are now 30. As an added bonus, many fast-moving wear parts are kept in stock and available for next day delivery.

JJ Bullen's future as a Hardox Wearparts Centre looks brighter than ever. The company sets great store by investing in people and infrastructure. In a neat twist, it now operates its own JJ Bullen apprentice scheme and reflecting its 'family firm' origins, it even has a father and son team working as apprentice and engineer.



Expansion

It is poised to grow further over the next year, adding new workshops and expanded premises. "Our success is all down to using superb quality steel and maintaining our reputation for high quality repairs," says Robert "We are committed to offering a full on-site welding service for our clients across the UK and beyond and have 14 fully equipped vehicles with everything on-board for all site work including stick and mig welding. We

strip all the components and rebuild them on-site, keeping downtime to a minimum for clients, which in the UK includes companies such as Tarmac, Aggregate Industries, Blue Group and Babcock. We are also happy to do site work globally and have recently completed our 4th visit to Africa welding Hardox wearparts on-site for Komatsu."

"We are delighted that JJ Bullen has become one of our latest Hardox Wearparts Centres with all the benefits that means to the business and its customers" comments Harald Pedersen of SSAB. "Robert's approach and achievements are testament to his focus on quality and high standards, and reflect the commitment to serve customers that marks out Hardox Wearparts Centres."

For more information on JJ Bullen please visit www.jjbullen.co.uk



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Coming Full Circle, Behan's Land Restoration

Restoration of former gravel quarry at Blackhall, Punchestown, Co Kildare

Most people consider it a blessing to wake up looking forward to going to work, this is certainly the case with Jason Griffith, site manager at Behan's Land Restoration located in Kildare. Machinery mad since a young boy, he happily spends his days surrounded by a host of equipment to help manage this busy 92 acre land restoration site. He is particularly pleased with the latest additions to Behan's machinery portfolio; a Terex Finlay J 960 Jaw Crusher and 863 tracked mobile heavy duty screener supplied by Ormonde Machinery.

Originally a sheep farm, owned and run by the Behan family, from the 1970's the site was leased by Ready Mix to excavate the sand and gravel that lay under the farmland. In 2002 the quarry was in the main fully excavated and the family took on the business of restoring the former Blackhall quarry. So began Behan's Land Restoration, taking in construction and demolition (C&D) waste for restoration, backfilling and recovery purposes.

Initially there was a reasonable amount of C&D waste available, however following the severe downturn in the construction industry from 2009 until 2015 there was a corresponding drop in material available for restoration and recycling.

The ability of Behan's Land Restoration to invest in recycling was also hampered by the failure of the Irish State since 2011 to determine End of Waste status for recycled materials. However, a decision on this issue is understood to be due in 2017.

The availability of construction waste is growing. The Construction Federation of Ireland noted at its annual conference in October 2016 that construction and demolition waste is growing in the Dublin area and that capacity to deal with it is an ongoing issue.

The quantity of C&D waste in the whole of Ireland in 2013 was approximately 2.9 million tonnes, but, since then it has started to grow again and in recent years it is reaching some 5.1 million tonnes per annum. With

a surge in house building and new major infrastructure projects such as the National Children's Hospital, DIT Grangegorman, and Dublin Airport's second run way to name a few, the volumes coming on track will only be increasing.

For Behan's, it means a steady flow of waste coming to the site which needs to be managed according to the best environmental and landfill operational practices. With approximately 400,000 tonnes of waste per year to deal with, the company needs robust machines to create the various grades of stone required to most efficiently deal with backfilling the site. The company based its decision to invest in Terex Finlay on its past experience of working with the brand, having previously used a 393 Finlay which proved a great workhorse for them.

When asked what were the main motivations for selecting the J960 Jason remarked "We were looking for a jaw crusher that could pack a punch but which fitted with our budgets, the J960 has proven to be an aggressive crusher with high throughputs" "We are seeing throughput of approximately 130 – 140 tonnes per hour of minus 100 mm materials. This is then fed into the 863 screener, which with its versatility works well with the J960"

Fuel efficiency has proven to be a real positive for the company, with unexpectedly low running costs. "The telematics system indicated we are doing about 17 litres of diesel per hour, from both an economic and environmental perspective this is positive for us"

The compact size, excellent mobility and high crushing capacity even at tight settings in recycling and hard rock operations make the Finlay J-960 ideal for small to medium sized operators such as Behans. >



Working with the Finlay J960 is the 863 heavy duty screener, Jason outlined why he selected this screener "The 863 was both compact and aggressive and most suitable to work with our processing of construction demolition and our recycling application" "Our machine is fitted with a 45 mm top deck and 20 mm bottom deck mesh, it splits the material off the crusher to give the specified products required. In our case 20mm to 45 mm for drainage, + 45 – 90 for roads and finally the fines which is treated as waste product."

With such a busy site, avoiding operational downtime is a priority. When selecting a partner to work with, Behans were looking for a support team with the expertise and ability to respond quickly.

For Jason working on site with limited staff, having technical and sales support in the background is a massive source of reassurance. "With the recent weather conditions, we were receiving quite a bit of sticky material - we simply made a call and Ormonde's service engineer came down, changed the mesh which significantly improved production off the first belt"

As with all Terex Finlay jaw crushers, it comes with the T-Link remote monitoring and fleet management telematics system installed. This system enables owners remotely manage and stay connected to; keep track of their equipment, monitor work progress, manage logistics, access critical machine information, optimise machine performance and perform remote operator support.

Ormonde Machinery supplies a wide range of materials processing solutions, it prides itself on having not only expert teams in house but as Ireland's Terex Finlay dealer, access to a host of engineering expertise. The company has been dealing with a number of land restoration projects and Conal Mullan Managing Director recently commented that "We are delighted to be working with Behans, as well as other recycling operations across the country. Each project we work on, we learn something more and this feeds into a continual process of improvement for us as a company and the services we bring to our customers."

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Jason Griffith & Kathy Purcell



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Rebuild results in a 30% drop in primary crusher power draw at Norstone Tau

When an investment in brand new equipment is not feasible, a rebuild is an option that can also result in significant improvements.

This was the case at Norstone Tau in 2012. Located on the southwest coast near Stavanger, Norway, Tau is Norstone's largest plant in the country. Half of the quarry's production is shipped for export, while the rest is sold in Norway, with biggest customers being asphalt producers.

The primary gyratory crusher had seen its best days and was consuming excessive amounts of power. The quarry was looking for ways to boost short-term production capacity, and the primary just couldn't keep up. But a bigger expansion was also on the horizon, and likely including an investment in an in-pit primary crushing solution in 5 to 7 years. So, how to solve the interim bottlenecks?



Seamless collaboration helped meet deadlines

Norstone decided to call on Metso's knowledge to assess the situation. The existing primary crusher, a Svedala Superior 54-74, had been commissioned in 1984. After careful evaluation, the decision

was made to replace the spider, the top shell and the bottom shell.

Due to the nature and scope of the project, Metso experts frequented the site to share experiences and requirements with Norstone. Countless hours of measuring, drawing and designing ensued. Metso had to figure out how to increase the crusher's capacity while lowering the power draw. The final touch, wear part design, also played a key role in the outcome of the project.

Thanks to detailed planning and seamless cooperation between the two parties, the removal of the old parts and the installation and commissioning of the new ones was completed in less than 4 weeks during a pre-planned shutdown in late 2014.

"We have always had good collaboration with Metso. You can really see that the people visiting us are highly skilled, they know what they are talking about, and they're actually offering us valuable advice," says Plant Manager Marie Reumont.

The results speak for themselves. The average power draw during operation has dropped from 250 kW to 170 kW, while the average capacity has gone from 900 tons per hour to 1260 tons per hour at a 47% load.





Wear parts can be bought anywhere, expertise cannot

According to Marie Reumont, the concave segments now last for about 2.4 million tons, which was also the goal. At first, Metso was on site every 3 months to help follow and monitor wear and to establish a routine.

But the real work of optimizing and fine tuning is only starting. "I think that there is always room for more improvement, however small, so we will keep monitoring this and working to maximize the optimization," Reumont says.



"And because the results with Metso have been very good, we are considering the possibility of further improvements on other machines," she continues.

First up for optimization is the secondary crusher. Because the cone produces a finer product, the goals for optimization are somewhat different. Lifetime extension is not enough; the quality of the end product is another crucial parameter. "We are pleased that Metso has understood our needs so that we can work together in that direction," the plant manager concludes.

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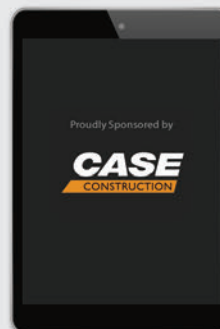
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An industry view from Jason Purllant of Rubblemaster



Jason Purllant of Rubblemaster

What is driving the changes in the industry?

In my opinion the changes are being forced upon the processors to raise standards of final product that is used on jobs, to recycle more aggregate and be innovative with how we use the final product.

Processors will focus on efficiency of production balancing output and operating costs against the need to produce a quality final product.

I can see a growing demand for impact crushers as operating costs for these types of machines has tumbled and residual values risen against these sought-after machines.



Aggregate processors will need to differentiate themselves from their competition

Where will the industry be in 5 years' time?

The UK in many respects is very different in recycling terms to mainland Europe. Many of the thoughts and ideas being introduced in the UK have been in existence for a few years in Europe.

The quality of the products that are being produced must rise in the UK to meet the rising standards demanded of aggregate customers. No longer can customers produce a product that doesn't meet any standard.

Is the market growing for crushers?

The market is growing but also changing. People have been using jaw crushers since time began to crush their aggregates. Jaw crushers were proven to work and are simple to use.

However, the market is now demanding something different. Customers are demanding a better shape from their crushed product with a growing demand to produce smaller sizes for pipe bedding for example.

People are also looking at re-using small sized aggregate to produce concrete. There is no need any longer to use virgin aggregate.

Aggregate processors are faced with the challenge of size and shape that a jaw crusher alone can't produce what the market is demanding. Some processors have resorted to "double" crushing and screening out the smaller product but everyone accepts this is a highly inefficient way of producing small single sized products.

The UK are thus, seeing a rising demand for impact and cone crushers. Impact crushers are the "catch all" of crushers that can crush everything from asphalt to contaminated c and d waste with steel in the feedstock.

Cone crushers in conjunction with a jaw crusher are being used as in hard rock areas to produce the highly-sought after smaller single sized product.

Author - Jason Purllant of Rubblemaster



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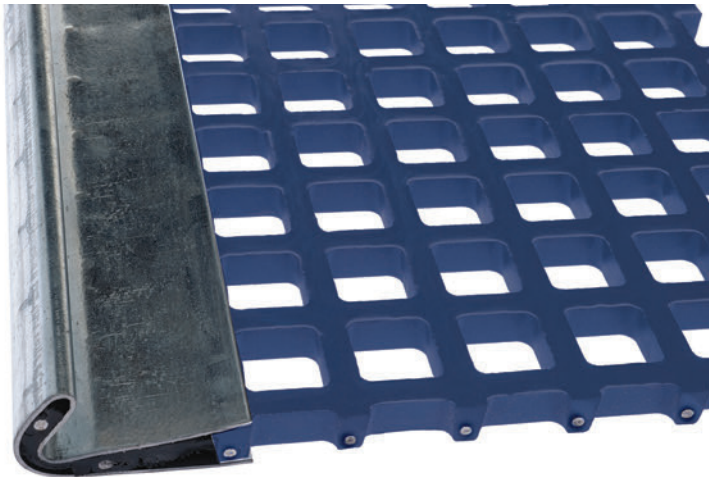
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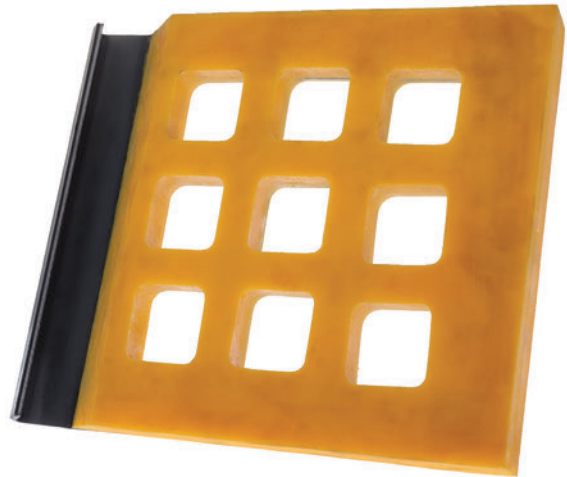


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Haver & Boecker offers hooked engineered screen media, such as Ty-Max, that can be hooked to a cambered deck to eliminate the need for a costly conversion to a flat deck when switching from woven wire to polyurethane screen media.



Haver & Boecker engineered screen media, such as Ty-Wire, is poured open cast at the only polyurethane facility in North America that blends its own material, which is critical for quality control.

Haver & Boecker Offers Hooked Engineered Screen Media as Alternative to Costly Deck Conversions

Haver & Boecker, a leading equipment manufacturer and solutions provider in aggregates and mining applications, offers its Tyler brand of hooked engineered screen media as a solution to the problem of expensive deck conversions. Tensioned screen media can be used on a cambered deck, eliminating the need for a deck conversion when switching from woven wire to polyurethane screen media. The media includes products such as Ty-Max and Ty-Wire.

Hooked screen media allows operations to easily switch from woven wire to modular polyurethane products without the expense of a deck conversion. Retrofitting a machine from a cambered deck to a flat deck can cost as much as \$15,000 per deck. Tyler's tensioned screen media is used on a cambered deck to eliminate the need for that conversion. This also allows operators to test the media on a vibrating screen with no additional cost or commitment.

Another benefit is that Ty-Max and Ty-Wire can be blended with woven wire or self-cleaning screens on cambered decks. In many applications, operators are looking for more wear life on the feed end of the screen. This can be accomplished by installing a section of Ty-Max at the feed end. Ty-Wire can be used in the middle of the deck, for example, where basic screening takes place to give operators the ideal combination of wear life and open area. Using woven wire or self-cleaning screens at the discharge end will provide maximum open area at the end of the deck.

The polyurethane screen media is manufactured out of Tyrethane, Haver & Boecker's signature blend of polyurethane. It's made in the only facility in North America that blends its own material, which is critical for quality control. Chemists developed Tyrethane to offer the best combination of open area and wear life for both wet and dry applications.

Tyrethane is poured open cast, resulting in 1.5 to 2 times longer wear life than injection-molded products sold at comparable prices. In addition, open cast polyurethane permanently hardens when cured to maintain its chemical properties, so it resists wear and tear. Injection-molded screens can soften when the temperature rises during screening, resulting in shorter wear life.

Haver & Boecker manufactures a variety of Tyrethane screen media options to suit different operations' applications, taking into consideration top sizes and opening requirements. Operators looking for high durability and strength choose Ty-Max, which Haver & Boecker reinforces with an internal wire grid as thick as 3/8 inch. Ty-Wire combines woven wire with an engineered composite to achieve open area closer to wire cloth but with four to six times longer wear life. Ty-Wire weighs less than woven wire, making it safer to handle and easier to install.

Haver & Boecker also offers Ty-Deck modular panels, available in multiple configurations for flat deck setups. Ty-Deck's lightweight design eases installation and sectional deck replacements.



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Mobile impact crusher MF 16 S convinces with high throughput in recycling



Jef Kempeneers (Gyro) and Mehdi Belkalem (Wirtgen Group Belgium) at the handover of the machine in May 2016.

The Belgian recycling specialist Gyro has put a new mobile impact crusher MOBIFOX MF 16 S into operation in Antwerp. With a high-performing combination of plants from Kleemann slag is processed which occurs as a by-product during the recycling of precious metals.

Integrated approach to the recycling of precious metals

For 15 years now Gyro has been working together with Umicore at its site for recycling precious metals in Hoboken. 17 different metals are processed at the world's largest and most complex precious metals recycling facilities. As Umicore is increasing its capacity, Gyro decided to expand its machine fleet. Various processes were tested to guarantee a high-quality product. In the end the mobile impact crusher MOBIFOX MF 16 S from Kleemann was selected. "With the combination of a MC 125 Z and the MF 16 S we achieve the best result with high cubicity and 30% content of fines", states Guy Kempeneers, Managing Director of Gyro. "At the same time we have a high hourly output of 350 tonnes."

Efficient treatment of slag

The rough grain sizes of 300-900 mm are used as armourstones. The finer material is crushed in the primary phase by the MC 125 Z jaw crusher and the grain size of 0 - 125 mm is then fed to the MF 16 S by direct loading. There the fine material 0 - 4 mm is thoroughly classified by the triple deck vibrating screen and the oversize grain is crushed to 4 - 28 mm. Both final grain sizes are used for concrete applications instead of gravel and sand. "The requirements for recycling material are becoming more stringent. In order to observe the CE and COPRO certification, we regularly take product samples", states Jef

Kempeneers. In order to check the quality of the products on an ongoing basis, Gyro examines these samples in its own lab.



In the primary crushing stage the mobile jaw crusher MOBICAT MC 125 Z crushes the slag.

Plant design tailored to customer specifications

Thanks to the high performance of the MF 16 S, Gyro is able to produce higher tonnage rates in a shorter time and thus save on operation costs in the long run. But it was not only the product quality and performance which were deciding factors in the purchase of the MF 16 S. Gyro already owns 15 Kleemann crushing and screening plants and places a high level of trust in Kleemann. Together with the Wirtgen Group subsidiary in Belgium and the technical development department at Kleemann, the machine was designed especially for this recycling application. Useful options were also installed in the plant: The MF 16 S is

equipped with a spray system in order to have minimal dust formation. There is also the option of an external power supply for low-consumption operation.



www.hub-4.com/directory/481

The mobile impact crusher MOBIFOX MF 16 S processes slag for concrete applications in the secondary crushing stage in Hoboken in Belgium.

Terex® Finlay launch new V-2050 Vertical shaft impactor



The new Terex® Finlay V-2050 is a high capacity tracked Rock on Rock (ROR) vertical shaft impactor.

This impressive machine is built around the field proven Canica V-2050 chamber that features a new patent pending hydraulically controlled dual flow system. The Dual Flow system helps elevate the crusher's throughput capacity without increasing the overall drive power.

The Canica 2050 VSI "broke the mold" when it comes to throughput capacity, superior product quality and all round product control. The heart of the VSI is the 6 port heavy duty closed rotor. The rpm of the rotor is controlled by changing the engine speed. The crushing chamber's rock shelf is easily accessed through the side door, which also helps speed up maintenance checks on the rotor.

This impressive tracked VSI is ideal for applications that demand the best product shape and quality, with a throughput capacity that can only be admired.

The high velocity rock on rock crushing process produces a superior high specification product in quarrying and mineral processing industries with excellent overall plant throughput capacity.

Key features:

- The crushing chamber's rock shelf is easily accessed through the side door, which also helps speed up maintenance checks on the rotor.
- Metal detection system on feed belt with 'auto-stop' protects the chamber from tramp metal and the purge system removes contaminants from the machine.
- Fuel efficient direct drive transmission via a clutch.
- Advanced variable speed control settings for producing a quality aggregate.

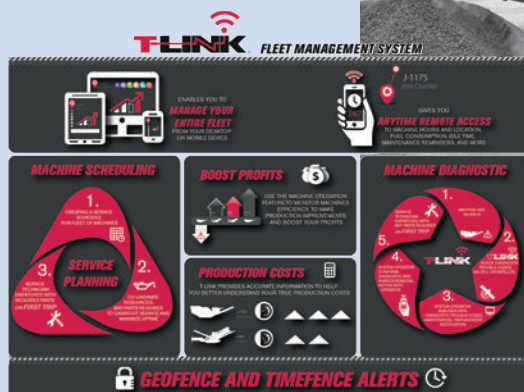


Terex Finlay launch new I-140RS impact crusher

Terex Finlay have followed up on the successful launch of their I-140 impactor with a new variant, the I-140RS.

This new generation impact crusher with redefined style and advanced technological design gives improved material flow and production capabilities in quarrying, mining, demolition and recycling applications.

Incorporating the robust and proven Terex® CR032 Ø1270mm x 1240mm (Ø50" x 48") impact chamber with direct drive and advanced electronic control system the machine provides operators with high material reduction ratios and produces a consistent product shape.



The high productivity, ease of maintenance and operation makes the machine an ideal solution for large scale producers and contract crushing operators.

A significant engineering approach being introduced in this model is the material flow through the plant. The flow of material has been significantly improved by increasing the width of components as the material moves through the machine.

The machine features an advanced electronic control system that regulates the heavy duty vibrating feeder (VGF) with integrated pre-screen to maintain a consistent feed of material into the impact chamber for optimal crushing conditions. Material from the integrated pre-screen can be diverted to a stock pile via the optional by-pass conveyor, or it may join the crushed product on the main belt. The standard hopper capacity of 6m³ (7.5yd³) places the machine at the forefront in this competitive market sector.

A key component of the machine is the on-board innovative quick detach 4.8m x 1.5m (16' x 5') single deck screen. For applications not requiring recirculation of materials for further processing or stockpiling the complete screening and recirculating system can be quickly detached from the machine.

Key features:

- The ease of material flow through the machine has greatly improved with each component increasing in width as the material moves through the machine.
- Fully hydraulic assisted apron setting features makes adjustment of the aprons convenient and efficient.
- Heavy duty vibrating grizzly feeder (VGF) with integral pre-screen removes dirt fines and sizes bypass material for reprocessing.
- Quick on-board detachable recirculating system including large 4.8m x 1.5m (16' x 5') single deck screen.
- Recirculating conveyor can be rotated from closed loop configuration or utilized for stockpiling making an additional oversized product.

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Working Safely Together: Site Segregation and Operator Awareness



Equipment operators are commonly required to complete the same or similar tasks continuously. Repetition of tasks can create complacency which often increases the risks of accidents unless the relevant safety processes are in place. Mentor believe that it is vital for organisations to manage risk appropriately by what may happen, rather than reacting to something that has happened.

Segregating equipment and pedestrians is the preferable, safest solution to eliminate risk, however this isn't always practical within mobile plant operations. Safety measures must therefore be put in place in order to minimise the risk as much as possible in order for mobile plant equipment to work cohesively alongside pedestrians on the site safely and efficiently.

Ensuring that the following points have been considered will provide a good start:

- Risk assessments
- Procedures and processes (Safe Systems of Work)
- Pedestrian and equipment segregation, where practicable
- Operator training
- Manager/supervisor training
- Staff engagement
- Support from the top
- Don't make it a 'one off' project!

The elements offer a good platform to work upon, however it is always essential to apply these to the specific environment that you are operating in. Mentor Training Solutions offer 10 practical tips for reducing the risk:

1. Planning – Is it possible to re-route or re-schedule journeys? Think about whether these can move so that they are not coinciding with operations. Activities could be carried out during maintenance times or breaks, or alternatively product could be brought to a safe area. A Banksman/Marshall escort may help where the alternative options are not possible.

2. Zonal Marking – In order to ensure safety on site, pedestrians and mobile plant should be separated as much as possible. Pedestrian routes should be clearly marked and crossings should be easily definable. Where possible 'pedestrian only' or 'authorised personnel' areas should be designated.

3. Speed/directional restrictions – Ensuring you have speed limits on site can significantly reduce the risk of collisions. Implementing a one-way system could also help facilitate the flow of traffic.

4. Restricted space – Often many different types of equipment operate within a close vicinity, in these cases it is crucial for good all round visibility. Staff should be aware of the correct observational techniques and apply these, for assistance, mirrors / cameras / radar / detection can be fitted in the vehicle. If these are used they should be regularly checked to ensure they are in good working condition.

5. Visibility – Mobile plant operators and pedestrians should be strongly encouraged to wear the relevant PPE and operate with caution. In quarries where small vehicles such as Land Rovers are used visibility aids such as flags, livery or beacons alongside the relevant safety procedures will ensure these are visible from height in machine cabs. If attachments or visual aids are being used extra care should be taken when fitting these to ensure they're not obstructing / blocking the operator's view. Due to the large size and shapes attachments such as double block grabs or personnel cages these can significantly reduce visibility.

6. Lighting – Poor lighting can lead to pedestrians not being easily visible to operators and others working alongside them. Lighting issues occur most commonly in enclosed spaces such as waste transfer stations. These issues are easily rectifiable by fitting additional lights to equipment and in any areas where pedestrians operate.

7. Traffic routes/site layout – In environments which serve as storage areas as well as transportation areas such as block plant yards, the sock often deciphers the site roadways. The site's dynamics can change rapidly due to the demand of customers therefore it is important that traffic routes are managed well and communicated effectively to all personnel operating in the vicinity.

8. Information for visitors – All visitors including contractors, maintenance personnel (particularly those who aren't used to the working environment) should be made aware of safe routes around site and the safety procedures in place for working within a close range of mobile plant.

9. Deliveries and collections – It is within best practice to check that drivers have the latest details on the designated roadways and pick up points on site, as these are often subject to change. Drivers should only leave their cabs when it is safe to do so, this should be communicated through appropriate signage and/or verbally.

10. Guidance for foreign employees – To a considerable amount of mobile plant operators English is their second language, care should be taken to ensure they are aware of the risks on site and understand the safety procedure in place to minimise these. This could be considered in their training and when introducing new signage or new processes.

Businesses can significantly reduce the risk of accidents and meet their safety responsibilities whilst maintaining their productivity and reputation if they have the relevant safety procedures and processes in place. For further guidance on site segregation and awareness, please call Mentor on 01246 386900.



Out with the old & in with the new for McKinstry's Skip Hire

Northern Ireland's leading Waste Management Company; McKinstry's Skip Hire, praises their 'old faithful' as they upgrade to the bigger and better Slayer XL!

Over 20 years ago, McKinstry Skip Hire were taking 90% of all the waste collected across Northern Ireland and putting it straight to landfill. Today those figures have virtually been reversed, with over 92% of waste collected being recycled/reused and 6% used for Energy from Waste (EFW) and only 2% being sent on to landfill. A vital component contributing to McKinstry Skip Hire impressive recovery process has been the EDGE Slayer X.

Working on the front line for 5 years and processing a large percentage of the 155,000 tonnes of waste received annually by McKinstry's Skip Hire, the Slayer X has been upgraded by the skip hire company with the recent purchase of an EDGE Slayer XL. McKinstry's first EDGE Slayer X purchased in 2011 worked effortlessly for five years. Over the five years of operation from the EDGE Slayer, it has been projected that it had processed in an excess of half a million tonnes of waste!

At McKinstry's, over 90% of the waste is recovered using a manual pick team to attempt to recover commodities to an extremely high standard. The EDGE Slayer X had the ability to process a consistent piece size of 350-400mm which makes the throughput and the manual picking process much easier for the picking team at McKinstry's MRF site. The site recover different grades of bottles HD and PET, different types of metals; ferrous and non-ferrous, along with different papers, fibres and films. McKinstry's Site Supervisor Aaron Rianey states, "The EDGE Slayer has been very important to us over the past five years. It was known as our old faithful here! It made everything much easier and presented the waste to our manual pickers in a workable form."



For McKinstry's, the EDGE Slayer XL was at the top of the list, due to the exceptional performance of the Slayer X. A key factor for McKinstry's choosing the Slayer XL was the anticipated performance and reliability that was evident with their previous unit. The EDGE Slayer XL, twin shaft, slow speed shredder provides an additional 20% more throughput than the smaller Slayer X. "We are still going to get our piece size with the Slayer XL, along with far more throughput, which is exactly what we need!" I can programme the Slayer XL to work anywhere on site, doing many different aspects and still achieve maximum throughput!" The Slayer XL has been designed with a HMI Control Panel, which provides easy fine tuning for accurate application performance. A simple touch of a button and the EDGE Slayer XL is set-up to process wood waste, green waste or municipal skip waste, which is vital to busy site that accepts such a broad range of waste.





The EDGE Slayer chamber houses two, slow speed, high torque shredder shafts. Aaron explains, "One of the main things I like about the Slayer XL is, if something gets into the chamber or something the machine doesn't want in the chamber, the machine will shut down, it will not shred on and cause a lot of damage!" The intelligent tramp metal cycle found within the Slayers operating system ensures against asset damage and large percentage downtime that can be associated to other shredder types.

After 5 years of operating the EDGE Slayer X, Aaron describes the aftersales customer support from EDGE Innovate; "the back up with the EDGE guys, is second to none. We are delighted with the service and support, we receive from

them!" With EDGE Innovate's design and manufacturing headquarters situated in Northern Ireland, EDGE are in the prime position to offer untouchable access to aftermarket and technical support to McKinstry's MRF site.

Operating and Running costs is something every waste management company monitor, especially for the award winning McKinstry's Skip Hire. The Slayer XL has relatively low fuel consumption of 25-30 Litres/per hour, compared to many market rivals. The EDGE shredder also has a central auto-lube system which provides reliable protection against friction and wear. It also ensures the machine is attaining enough grease at all times. As well as this, the Slayer Range from EDGE has a reversible fan system to make sure the machine is also breathing. All of which ensure that the EDGE Slayer XL is the lowest maintenance cost shredder on the market!

Aaron describes the ease of performance with the EDGE Slayer XL, "With the majority of options wired into the PLC on the machine, the screen tells us everything we need to know! The only thing my man has to do in the mornings, is a simple check sheet and then it goes off to work!" It's as simple as that!

With high application flexibility, proven reliability, consistent product piece size, coupled with low maintenance and operating costs; it looks like the decision to purchase a new EDGE Slayer XL was a no brainer for the folks at McKinstry's Skip Hire.



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Eriez at forefront of metal separation solutions for the waste industry

With constantly changing industry regulations, Eriez continues to develop their magnetic separation and metal detection products to meet the growing demands of the recycling and waste industries.

The eccentric RevX-E ST22 Eddy Current Separator (ECS) remains at the forefront of Eriez' separation equipment, originally developed to separate non-ferrous metals from PET flake triggered by an upturn in plastics recycling in 2012 and 2013. Since then, the RevX-E ST22 has become the flagship ECS for Eriez and a renowned market leader in fine particle separation. Multiple trials at Eriez' Recycling Test Centre have yielded exceptional separation results on fractions as small as 500µm-1mm.

Following a decline in this market due to rock-bottom oil prices, Eriez' efforts have shifted towards the waste and scrap metal markets as well as the incinerator bottom ash market. As a result, sales of high-strength SRP Scrap Drum Magnets, Suspended Magnets and Eddy Current Separators have grown rapidly, providing optimum metal recovery for heavy ferrous, tramp iron and non-ferrous metals.

As part of the focus on the scrap metal market, Eriez have developed cutting-edge metal-loss technology in the form of the MLM Metal Loss Monitor. The Eriez MLM utilises an online portal which accurately reports and access live process information to help scrap facilities measure and track the amount of metals being lost to the waste stream. The MLM

reports live data from plant adjustments to quantify and reduce metals sent to landfill, directly improving profits whilst reducing downtime.

More recently, the industry has shifted towards biomass processing as valuable fuel supply contracts become available to feed the growing number of incineration power plants across Europe. Many waste processors are now utilising the Eriez TP Twin-Pole Overband Magnet for efficient ferrous metal recovery from the waste wood feeding the incinerators. The TP magnet combines high levels of field strength and horizontal iron lift to minimise belt damage from sharp nails & screws, which are often found in waste wood.

The continued success for Eriez in the recycling industry follows the company's global announcement that more than £300,000 will be invested in a new rotor manufacturing facility at their European manufacturing headquarters in South Wales, which will increase production capacity of Eddy Current Separators per year by more than a third.

Gareth Meese, Sales Director at Eriez Europe commented: "The investment in the new manufacturing facility signifies Eriez' commitment to customers in the recycling industry. This expansion will help us strengthen our manufacturing capabilities to keep up with demand and maintain our competitive advantage."



www.hub-4.com/directory/280

Denham Metals boosts material handling capability with Liebherr

Based in Bishop Auckland, Denham Metals has a relationship with Liebherr going back over 25 years. The company has recently purchased an LH 50 M material handler from Liebherr. This joins a smaller Liebherr machine: the LH 40 M material handler.

Bishop Auckland based Denham Metals has recently invested in another Liebherr material handler to support an increase in trade. The latest purchase, a 45 tonne LH 50 M material handler, has recently started service at the company's head office alongside a smaller 38 tonne LH 40 M material handler.

The long-standing relationship between Denham Metals and Liebherr-Great Britain Ltd goes back over 25 years with Denham Metals taking one of the first A 904 handlers to enter service in the north-east of England.



Denham Metals currently operates three material handlers at its head office with one coming from a rival manufacturer. Managing Director Joseph Denham explains that longer delivery times and a very attractive deal had swayed them away from Liebherr machines. However, this latest purchase reaffirms Denham Metals' relationship with Liebherr and the LH 50 M has been proving its worth in handling incoming material in the yard and loading containers with products bound for export.

The LH 50 M and the LH 40 M both benefit from a heavy-duty industrial chassis with centrally-mounted slew rings designed to offer superior balance and weight distribution. Each of the two machines is fitted with front and rear stabiliser legs complete with maintenance-free cylinders. And they both have solid tyres, a necessity in their working environment, with the smaller machine running on twins and the bigger LH 50 M running on large singles. The LH 50 M and the LH 40 M benefit from excellent ground clearance allowing them to safely move around the large stockpiles of material without the risk of damaging the running gear.

The latest Liebherr-made D934 engine has been fitted to both machines with the older LH 40 M meeting Tier 3B emissions regulations and the newer LH 50 M meeting Tier 4 emissions standards thanks to the addition of SCR technology. The 7 litre engine develops 211 HP at 1800 RPM and offers extremely low fuel burn figures averaging 16.5 litres per hour. Both handlers are fitted with hydraulically-adjustable cabins capable of taking the operator to a maximum height of 5.6 m above ground level. This feature is particularly useful when loading bulk trailers as the operator can

ensure the trucks are filled to their capacity. Regular operators of the two machines are very complimentary about the Liebherr cab saying it is exceptionally well laid out and comfortable with excellent all-round vision. Both machines are fitted with Liebherr's standard joystick steering system, which allows the operator to steer the machine via the proportional rollers on the joysticks. This system also means there is no steering column to the front of the cab, which further improves forward vision.

Both Liebherr material handlers have been specified with straight industrial booms and industrial dipper sticks giving them a reach of 15 m and 16.5 m and a pin height of 15 m and 17.5 m respectively. The machines are fitted with Liebherr's 1.1 m³ capacity GM70 5-tine orange-peel grabs.

The Energy Recovery Cylinder (ERC), which is fitted to the main boom, sets the Liebherr machines apart from those of many other manufacturers. The ERC is installed between the two main boom hoist cylinders and is used to accumulate hydraulic pressure whenever the boom is lowered. This pressure is released when the boom is lifted, reducing the pump pressures needed to raise the boom. This release of energy allows the engine to work more efficiently and will reduce the machine's fuel burn. The fitment of an ERC is becoming a popular option for purchasers of Liebherr material handlers as fuel saving figures of over 10 per cent can be achieved.

To enable Denham Metals to focus on its core business, the two new Liebherr material handlers have been purchased with a repair and maintenance servicing contract.



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Barrett Concrete Ltd invest in a Portafill Crushing & Screening Plant

Barrett Concrete Ltd, a Northern Ireland based company have recently invested in a complete crushing and screening plant from Portafill International Ltd for the processing of glass bottles and glass panels.



The process starts with a Portafill 7000 Impact Crusher fitted with screen box and re-circulation. Material is fed to the crusher which reduces the material size to 20mm. The +20mm can be re-processed or stockpiled as this normally contains the aluminium and rubber found around the glass edge.

The -20mm is then sent to a Portafill 5000 screening plant which screens the material at 4mm. The +4mm material can be re-processed via the Portafill 7000 or stockpiled

The end product, -4mm, is being used in multitude of applications. These include sand / grit blasting, block making, and for use as bunker sand on golf courses due to the drainage qualities of crushed glass.

If you would like more information on this interesting application please do not hesitate to call John O'Neill on 07766 405688 at Riverside Machinery Ltd.

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It's all clean and green at Forth Resource Management Ltd

Especially so with the arrival of a new Volvo L90H loading shovel which takes charge at the company's Todhills composting site on the outskirts of Edinburgh.

The new 12 tonne loading shovel which was ordered by Forth Resource Management (FRM) at this year's Scot Plant exhibition has been supplied complete with a 3.0m³ quick attachment mounted Hi Tip bucket complete with top clamp. "Both the size of the machine and especially the size of the bucket are the key to handling the variety, weight and density of the materials arriving here on site," explains Operations Director Alex Dunbar. "Here at Todhills we receive a whole variety of material ranging from green waste from street collections, waste wood, some inert concrete and rubble but in particular, topsoil for screening and processing coming from greenfield sites which is then blended with the compost we produce. The L90H and bucket combination is proving to be the best optimum solution for handling this type of diversity in our opinion."

FRM are not exactly strangers to the Volvo brand as Alex explains. "When we set up the business fourteen years ago we purchased a Volvo BM LM642 and a 4200B from an uncle of one of the business partners which had both been previously engaged on farm work. We've still got the machines and they're still running but this is the first new Volvo we've purchased. Volvo has a strong reputation for being a quality brand and we have high expectations from the new L90H in terms of performance and reliability but additionally from a strong residual value further down the line."

But the company didn't just stop at ordering the L90H and followed this up with an order placed for a second hand L60F. "This now brings the total shovels we operate across our nine recycling centres around Edinburgh, the Borders, East Lothian and Midlothian to nine machines," says Alex.

The L90H supplied to FRM is powered by a Volvo Tier IV final Volvo 6 litre engine, developing 186 nett hp with a maximum



torque of 853Nm at just 1400rpm. The machine also benefits from Volvo designed and manufactured driveline components, designed to offer considerable fuel savings each shift. Fuel savings are further enhanced by the Volvo Eco pedal, encouraging the operator to run the machine at its optimum rpm in the engine's torque curve. To meet FRM's specification requirements to operate the Hi - Tip bucket with top clamp, the machine has been fitted with third and fourth line hydraulics. Another important feature to safeguard the well-being of FRM's machine operators is the addition of a BM AIR filtration system designed to filter and pressurize the air entering the operator's cab. This eliminates dust and odours arising from handling decomposing materials (green waste and compost). The system includes an audible and visual warning if the pressure drops inside the cab – for instance, if a window is left open or the door improperly closed.

Both the L90H and the L60F have been supplied complete with Volvo Blue Service agreements ensuring that they will be regularly maintained by Volvo service technicians using genuine Volvo parts. Both units also benefit from Volvo's CareTrack telematics system which can provide Alex with operating information and statistics remotely.

Redefining 'Fit for Purpose'

When it comes to selecting waste and recycling machines, 'Fit for Purpose' no longer means just lifting. David Banks, Sales Manager - Waste & Recycling Sector at JCB, offers a deeper definition.



The waste and recycling industry is a tough business that puts machines through their paces. Naturally, a machine will need to be 'Fit for Purpose'. But what does that mean exactly? Obviously, a machine should be able to lift, place, or shift materials. But being fit for purpose in the modern waste and recycling facility requires much more.

The broad range of tasks that machines are expected to perform every day in these sites has evolved – as have user expectations of the machines' capabilities to deliver a successful operation. Machines must be designed to meet these requirements, working in facilities that are generally operating long hours, handling increasing volumes, are open to the elements and are occupied by a mix of staff and visitors.

Only by fulfilling the following key purposes, will a machine fulfil the expectations of a waste and recycling site.

Increasing efficiency

Efficiency is the first key purpose – with economical fuel consumption being a prime factor. A fuel-efficient machine will contribute to your profitability while also providing a cleaner environment to work in. The power unit, being the heart of the machine, is the key to fuel efficiency: the right power unit should meet the latest emissions regulations and deliver fuel consumption savings without sacrificing the top quality performance. Not an easy task in an environment where the jobs are getting tougher.

Power coming from an engine that meets Stage IV/Tier 4 Final is a major contributing factor to a machine's fitness for purpose. Aimed at reducing the hazardous exhaust emissions of new vehicles sold in the EU and North America, these are latest stage of the engine emissions regulations, which apply to off-highway machines.

Clean engine technology can also help performance and reduce maintenance, which will minimise downtime. The JCB EcoMax Stage IV/Tier 4 Final engine range for example, requires no Diesel Particulate Filter (DPF) to meet the latest

standards. With no DPF components to maintain and service, operating costs are reduced. In addition, a lack of bulky DPF components results in a smaller engine package, hence a more effective machine design.

The Ecomax engine has been recalibrated to achieve the engine out emissions requirement resulting in a further 5% fuel saving. A compact selective catalytic reduction unit with a urea-based additive is used on engines above 75hp (55kW) and is incorporated into a single exhaust muffler, in many cases replacing the existing exhaust. This provides a 'one can' solution, delivering the same compact overall dimensions for machine designers. The technology is used across most of JCB's 35-strong Wastemaster range.

Productivity

Having the right machine for exactly the right application will fulfil the productivity purpose – machines designed for specific applications will be able to maximise productivity through seamless operation. Waste and recycling sites are harsh environments, presenting a challenge for any machine; this makes it essential to get a machine that has been designed for the job.

For example, JCB's 457 Wastemaster is designed to work in high output transfer stations and materials recovery facilities, where large volumes of material need to be handled. Typically the machine will be used to load hoppers and trucks and stockpile MSW (Municipal Solid Waste) and other recyclables.

Where there are operations such as loading and unloading of trailers that need to be carried out in confined spaces – there's the JCB 35D 4x4 Wastemaster Plus Teletruk. Its ability to reach forwards to lift and place loads quickly and safely allow operators can load and unload delivery trucks from one side – trumping the traditional forklift truck often used in this application, saving up to 50% of yard loading space and allowing them to drive right inside shipping containers.

Of course there are many other jobs that require different types of machine – the array of which is highlighted by the fact that JCB has 35 different vehicles to handle different tasks in its Wastemaster fleet. When selecting a fleet of vehicles to carry out different tasks on a single site or a collection of sites, it makes sense to source all of the machines from the same supplier. This will simplify finance, maintenance and even provide a uniform visual appearance. A supplier should therefore offer a broad range that can offer a choice of vehicle to deliver optimum output to the last available kilogram of waste material. A bespoke build for each individual machine should also be offered to the customer to ensure the machine meets their recycling and waste handling needs precisely.

Safety

Contributing to a safe working environment is an essential purpose for any machine used in waste and recycling. There should be zero compromise in safety in terms of the machine's design. This means constantly examining ways to take into account every potential eventuality, and leaving no stone unturned in the pursuit of complete safety and comfort for everyone within the work place.



Whether it is loose materials or large containers; hazardous substances or heavy machinery; slips, trips or falls, there's a lot of potential danger at waste and recycling sites.

Manufacturers of machines play a vital role in helping to increase safety for employees and visitors to sites through the design and development of new machinery. There are many protection features that can enhance operator safety and minimise any damage to machines, even when working in harsh environments. To fulfil the purpose of contributing to a safe site, the machine used on that site should be designed to provide excellent operator visibility, vehicle visibility, access, operator comfort, operator protection, lighting and technology.

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Reporting

Telematics provides complete assurance and reporting on the things that matter most, thus ensuring that the machine can continue to be fit for purpose on a daily, weekly, monthly basis. Reporting through telematics ensures maximum uptime by understanding when there are faults that need to be rectified, when services are due, or identifying inadequacies in performance.

There are further productivity gains that can be made through better management information and performance monitoring. Fleet managers and owners have remote access to real-time fuel consumption and machine working data – including operating hours and fault codes.

Having the ability to 'geo-fence' your investment using Telematics, ensures you are notified in real time should a machine leave a predetermined area. This provides assurance that the equipment is being used in accordance with the tasks set out.

Telematics that incorporates a tracking system will help protect the investment in the machines on a waste and recycling site. JCB's LiveLink, for example, shows the location of a machine and has helped recover over £3 million of stolen JCB equipment.

These check points provide an outline guide to consider whether a machine will be fit for purpose to work in a waste and recycling site. The best way to assess these points, and see if the machine really is fit for purpose, is to try out a unit as well as alternative machine options. After all, you wouldn't buy a car without taking it for test drive, so why make that investment without knowing the machines could do the job?





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PE Global Consulting saved £13,840.00 within two days

RUBBLE MASTER achieves 90% onsite recycling rate on city centre demolition site

Recycling demolition waste within a small contained inner city environment can be a tricky business especially if the demolition material needs to be removed from the site. One recent demolition project taken on by PE Global Consulting in the city centre of Manchester demonstrated perfectly that not all waste requires removal from site. Directors reported the project had achieved an overall recycling rate of 95% with 90% recycled and reused material remaining on site for future construction purposes. These targets were achieved in large with the use of an RM 70GO! tracked mobile crusher, supplied on rental by Warrington based attachment and crusher specialists ECY Haulmark.

The overall cost savings of using the RM 70GO! onsite over two days had been calculated by the contractor at £13,840.00 once the number of waste collection vehicles and fresh material delivery vehicles had been taken into consideration and the cost of the crusher rental taken off.

The site, situated along the busy A665 Great Ancoats Street in central Manchester occupies approximately 1600 square metres, half of which being used as a pay and display car parking area with the other half occupied by a disused two storey Victorian brick building, facing demolition ahead of a new development of modern residential and commercial buildings on the site.

PE Global Consulting faced the challenge of demolishing the existing two storey building, removing the waste material and preparing the ground for handover to the client. Due to the space constraints and busy main road position, they faced the challenge of minimising disruption from heavy goods vehicles continually entering and exiting the site.

With two excavators working simultaneously on site, the RM 70GO! was brought in once the building had been brought to ground level and the cellars fully excavated along with 20 tonnes of scrap metals and 12 loads of inert waste removed from site. The RM 70GO! crushed the remaining brick and concrete onsite, over a period of two days, producing approx. 600 tonnes of 50mm down crushed aggregate per day.

The demolition contractor stressed the product the RM 70GO! had produced had achieved a CBR pressure test for piling, once the crushed brick waste had been laid in 150mm sections with 3 to 4 passes on each roll of the material.

Recycling demolition waste onsite in city centres using RM crushers offers many benefits. As the machines are tracked and compact they can be delivered on a standard low loader with minimum disruption to the surrounding area. The RUBBLE MASTER can be operated by one operative via a remote-control unit from inside the cab. The machines produce an outstanding product, saving contractors from purchasing new quarried materials, also eliminates the need to remove large amounts of brick and concrete from site. Companies now have no longer to co-ordinate waste collection vehicles and the delivery of new materials.



Yorkshire Aggregates add a TEREX TRS550 Spaleck from their long-term partner Warwick Ward to take turnover over £7m a year

The HUB recently went along to visit Yorkshire Aggregates near Doncaster to take a look at the new TEREX TRS550 Spaleck recycling screen that has recently been supplied by Warwick Ward, one of the UK's TEREX Ecotec dealers.



L-R: Daren Bekisz, Finance Director for Yorkshire Aggregates with Simon Causier of Warwick Ward

We met with Mark Jones, Managing Director of Yorkshire Aggregates and Daren Bekisz, Finance Director. Mark told us about the business "We have a high quality, fully licenced, and long established aggregate business here on this 80 acre site, and are right next to the M18 motorway at junction 4. We have a C&D tipping facility that together with our own wash plant allows us to produce recycled aggregates including sand, and various grades of British Standard top soils. Our fleet of 12 wagons also enables us to collect quarried aggregates and provide a complete one-stop shop for our clients. We've dealt with Warwick Ward now for over 15 years and have been highly delighted with their dedicated service, which is very important to us. We have three 921 CASE loading shovels, two C210 excavators and a 221 CASE shovel, and now the new TRS550, all of which have been supplied by Warwick Ward. We already have a TEREX Finlay Spaleck which has been great, so knew exactly how reliable the Spaleck screens were."

"We've purchased the new TEREX TRS550 Spaleck recycling screen to continue the growth of our soil producing facility, where we have seen increased demand. We have all the ingredients here on site in abundance to produce quality top soil and when required to specification. The soil market has

changed considerably over the past few years and we cater for all customers including in-specification soils for house builders and those with more general landscape requirements. We produce a soil certified to BS3882 and we needed a machine that would be capable of producing a consistent high quality end product, and that's why we went for the TEREX TRS550 Spaleck."



Spaleck TRS 550 Screen

Daren Bekisz added "We currently sell around 500 tonne of soil per week, and we know that we can rely on the TEREX TRS550 Spaleck to produce the product quicker and maintain product quality, especially in wetter weather conditions. In terms of all-year round production it's the best machine out there and changing the decks is really quick, only taking a couple of hours to complete. Through the TRS550 Spaleck we are currently producing the soils with the oversize going back into our recycling and washing process."



TRS550

The TRS 550 is the ultimate screening machine for all difficult applications. The robust 3-way split machine combined with the accuracy and efficiency of the Spaleck 3D Combi screen box allows operators to screen materials previously classed as too difficult to process. The TRS550 Spaleck recycling screen is a tracked model that can be operated in a wide range of primary and secondary screening applications. The TRS 550 recycling screen features a two-deck German-designed recycling waste screen with Flip-Flow-Screen Elastica.

This high-performance waste screen is combined with advanced technology on the bottom deck to elevate the TRS 550 Spaleck Screen into its own class of recycling screen equipment. Applications that this recycling screen processes include municipal solid waste (MSW), construction and demolition material (C&D), incineration slag, light and heavy shredder fraction and metal recycling. Its processing capabilities and application flexibility make the machine the only all in one mobile solution for the processing and separation of recycling materials.

Spaleck Deck

The Spaleck screen features a 3D punch-plate as standard making it virtually block free, as well as material turners to ensure maximum fines removal. It has an aggressive flip-flow bottom deck with a variety of mat sizes available dependent on the application, all of which are secured with friction wedges, so no securing bolts are needed. The screen box discharge end can be hydraulically raised 500mm to facilitate efficient and easy media changing and maintenance.

Warwick Ward - Expansion and diversity

Warwick Ward (machinery) Ltd. was founded in 1970 by Mr Warwick Ward and has grown into the largest stockist and supplier of new & used wheel loaders, earthmoving equipment, waste recycling equipment and spare parts in Europe. They became a fully authorised CASE construction equipment dealer in 2006. Within a very short space of time they established themselves as one of the best performing CASE construction equipment dealers in the UK, offering the full range of new CASE equipment, products and services. In



2011 they achieved the accolade of being awarded the CASE European dealer of the year in the category of wheel loader sales - a very proud moment for the company. CASE has a long association in the construction, earthmoving and material handling sectors and is well renowned within the industry for manufacturing machines with excellent reliability, build quality and strong resale values. In 2015 Warwick Ward became the official Ecohog Windshifters Sole UK & Ireland distributor, and in 2016 another exciting development at Warwick Ward took place with the acquisition of the TEREX Ecotec franchise. They are now a leading UK distributor for the full TEREX Ecotec Range.

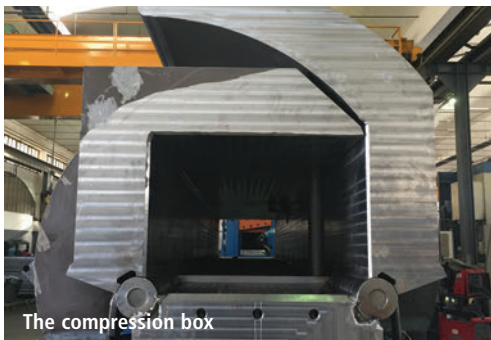
The partnership with TEREX & Ecohog was in many ways a natural progression for them, as they already had very close relationships with many companies large and small operating in the waste recycling sector through the CASE brand and the longstanding used equipment division. The addition of TEREX & Ecohog to our portfolio has further strengthened our position within the waste sector and we have now established very strong working relationships with many of the UK's largest waste recycling companies.

Before we left, Mark Jones finished by saying "We're looking forward to more investment over the next 12mths and growing the business even further. We also look forward to our continued partnership with Warwick Ward and their extensive range of machines."



For more information on the TEREX TRS550 Spaleck recycling screen please visit www.warwick-ward.com and to learn about Yorkshire Aggregates visit www.yorkshireaggregates.com

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The compression box



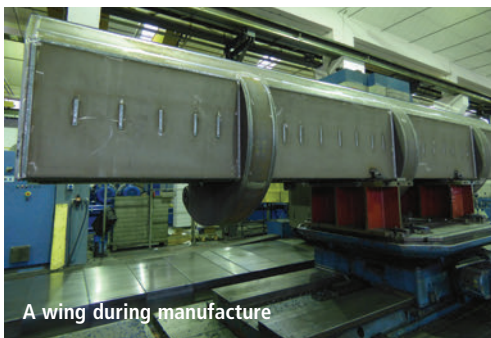
Swinging wings system



The C.E.G. Srl / TAURUS / Blue



TAURUS founder and CTO Claudio Colombo with the press



A wing during manufacture

Established in 1964 by Seniors Giovanni Colombo and Dino Giuliani, and located in Daverio, Northern Italy, C.E G. Srl is the driving force behind the TAURUS shear baler, shredder and pre-shredder range of machines for the recycling industry. They recently invited a select group of international press to join them at their manufacturing facility to take a detailed look at their manufacturing philosophies and technology that BLUE Group are now exclusively representing across the UK.

The visit began with a tour of C.E G.'s sister company Vanoli. This facility manufactures and supplies the main C.E G production site with all the major high quality components that make up the various machines. This is a high-quality manufacturing facility with highly skilled technicians with years of experience, and has the latest in cutting, bending and welding technology. High specification steel from preferred partners is used in the manufacturing process, as well as a substantial amount of specialist Hardox toughened steel from SSAB in Sweden, making the machines extremely strong.

We then moved onto the main C.E G. production site where we met with Gualtiero Rudella, CEO who explained a little more about C.E G. and TAURUS. "We have spent a lot of time and effort in looking for a new UK dealer, and initially met Blue at the RWM 2 years ago. Since then we have cemented a great working relationship and know that Blue Group have the key high levels of sales, service and support that we need to continue the success within the UK marketplace. To date we've sold 75 machines within the UK and more than 700 globally through our dealer network."

"At this facility here in Daverio we carry out the final assembly for all shear baler, shredder and pre-shredder machines, and this includes the final work for our patented 'swinging wings' system on our shear balers. All of our range is built on a bespoke basis from scratch for each client and lead time from order confirmation

is currently around 4 months. We will be investing further in our facilities and streamlining our processes to bring this closer to 3 months in the future. We are unique compared to our competition in that we manufacture everything from the large hardened steel components right through to the complex hydraulic systems, meaning we have full quality control during the manufacturing process."

Gualtiero Rudella further commented, "We have also recently added a Customer Care Manager, who is responsible for support, maintenance and final quality testing. The machine is only ready and available for dispatch once he signs it off and is satisfied with the quality of all components and systems on the machine. One thing that we are very proud of is the life-span of our machines, the average being around 18 years, but we still have some that have been working for over 30 years. This is testament to the build quality and expertise involved in the production process."

We were then given a full production facility tour where we could get close to the machines. The shear baler range starts at 500 tonnes and goes right up to 2,000 tonnes, all using the same features and benefits. They have a continuous metal base frame, which means that no expensive foundations are needed and TAURUS shear balers are typically heavier than the competitors using thicker 40 – 50mm sheets of Hardox wear plate in the manufacturing process with extra re-enforcement at critical points of the shear. A rotary encoder on the shear wings precisely monitors the position of each wing to within a millimetre. By reducing the hydraulic pressure in the wing cylinders just before the end of their stroke, vibrations are significantly reduced. Other manufacturers use positioning rods inside the wing cylinders which are not as accurate and prone to wear and tear.

TAURUS use twin hydraulic cylinders on the shear head giving a more even cutting force and less wear and tear on the shear guides. Specially designed polymer shear head guides on the movable blade holder absorb small particles reducing wear and tear on the

blade guides. Shear head guides and most wear liners are bolt on for easy servicing and replacement. The shears feature laser positioning, which is more reliable than traditional proximity switches and also improves efficiency as the clamp and shear only return as far as is needed and not all the way up, saving time and energy.



The shears during assembly

The compression box lengths are 6.1m, 7.2m or 8.3m and feature a honeycomb design for added strength. TAURUS include over stroke compaction on both wings, which is a unique TAURUS patented advantage. By over compacting the scrap before shearing a denser end-product is created, causing less wear and tear in the compression box.

Swinging Wings System

The 'swinging wings' compression system found on all TAURUS shear and baler models is the accumulation of more than 50 years of experience building over 700 shears and balers world-wide as well as an inherent continuous refinement philosophy within the C&G group. The TAURUS "two wing" compression system incorporates the following features: over stroke found on both compression wings, an all-new wing geometry, increased lever arms, optimal positioning of the cylinders.

The combination of these features result in reduced scrap preparation times, denser scrap and an optimal use of the "curved" transmission forces. Both the internal and external surfaces of the swinging wings which come in to direct contact with the scrap, are constructed of highly wear resistant Hardox steel with a class leading thickness of between 40mm and 50mm integrated into the wing structure itself. Coating both the inside and outside of the wings with Hardox steel, combined with the internal honeycomb structure of the wings, provides them with the necessary flexibility to guarantee an elastic return after twisting from high load stresses. This elasticity prevents permanent deformation and twisting damage from the high stresses involved in compressing scrap metal.

For more information on the TAURUS shear baler, baler and pre-shredder range of machines visit Blue Group at www.blue-group.com



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Raymond Brown lorries get a rebrand as business signs up to fleet safety scheme initiative

Caroline Nokes, MP for Romsey & Southampton North joins the Raymond Brown team

Leading recycling and waste management business, Raymond Brown have announced their commitment the Project Pictogram road safety initiative as they rebrand their tipper lorries to a more visible colour.

Project Pictogram is a fleet, business and community road safety communication aimed at reducing risks across our roads. It is focussed on the 'Fatal Factor' driver behaviour risks present in almost all Killed or Serious Injury (KSI) collisions. Raymond Brown is applying the five Pictogram stickers to all 82 of its vehicles and by doing so will provide daily on-road reminders of these key risks to all motorists on every journey. The business will also be taking the road safety messages into local schools as part of its Community Matters initiative.

Chief Operating Officer, Steve Clasby commented: "We are very excited to be rolling out Project Pictogram across our entire fleet of vehicles. Safety is at the forefront of everything we do and engaging with the community has always been a

key priority for our business. It creates an industry standard to which our fleet can align and ties in with the rebrand of our tipper lorries to a fresh new colour, promoting our commitment to sustainability and ensuring that our vehicles are clearly visible on roads. Project Pictogram is an excellent road safety communication initiative which promotes safer, freer flowing roads."

Caroline Nokes, MP for Romsey & Southampton North joined the Raymond Brown team for the unveiling of their new safety focused livery which incorporates the pictograms. An active supporter of the initiative since 2015, she echoed the Prime Minister's calls for cultural change: "This sort of community engagement initiative is exactly the type of motivator which can shift understanding of risks. Instinctively we all know which activities are dangerous whilst driving, and the pictograms will provide daily reminders of what we all have to pay much more heed to."

FCC Environmental Services opens large Bollegraaf Single Stream in Dallas

Bollegraaf Recycling Solutions and Van Dyk Recycling Solutions (North America's exclusive distributor of Bollegraaf, Lubo, and TOMRA equipment) have announced the delivery of the Dallas MRF, what is going to be one of the most advanced materials recovery facilities in the USA.

The newly opened materials recovery facility is employing a host of sorting technologies to curb-side materials from households. The state-of-the-art installation is capable of sorting 35 tons of Single Stream material tons per hour.

Bollegraaf Recycling Solutions is proud to announce the opening of the FCC Dallas MRF, one of FCC Environmental's first MRFs in the United States. The facility will accept all Single Stream material from the city of Dallas and the city of University Park, Texas.

The system was designed by Bollegraaf Recycling Solutions to bring Dallas closer to its goal of zero-waste by the year 2040. It successfully processed over 1,000 tons of material in its first two weeks and passed its required acceptance test for the city of Dallas prior to the contract start date of January 1st, 2017.

Specifications FCC Dallas MRF, USA

- Capacity: 35 tonnes/hr
- Input: Single Stream
- Surface area: 60,000 ft²
- Recyclables: paper, cardboard, glass, plastic and metals
- Technologies: Bollegraaf HBC-120S, Lubo Anti-Wrapping ONP Screen, Bollegraaf Drum feeder, Lubo OCC Screen, TOMRA Autosort 4, Overbelt magnet, Eddy current separator, Walair drum separator.

Innovative technologies.

The facility contains cutting-edge technology provided by Bollegraaf Recycling Solutions of Appingedam, The Netherlands. A series of Lubo Star Screens® (Lubo Systems B.V is part of the Bollegraaf Group) separates OCC, glass, fibre and containers.

The series features Lubo's newest offering, the Anti-Wrapping ONP Screen, the widest screen in the industry at 4.40 metres, with 440 stars. The stars incur virtually no wrapping, even after hours of operation. Cleaning and maintenance time is reduced to less than 10% of that of traditional star screens.

A total of four TOMRA (TITECH), model Autosort 4, optical sorters recover any remaining fibre and separate all plastics.

An over-belt magnet and Eddy Current recover ferrous and aluminium cans, respectively. And a glass clean-up system (Walair) creates four fractions of clean, sellable glass. The system is capped off by a Bollegraaf HBC-120S baler that can bale all commodities accepted at the facility.

Bollegraaf HBC baler produces heavier bales.

As well as being quieter and more efficient, the new balers and their installation have also been designed to be as safe as possible and to meet the safety requirements.

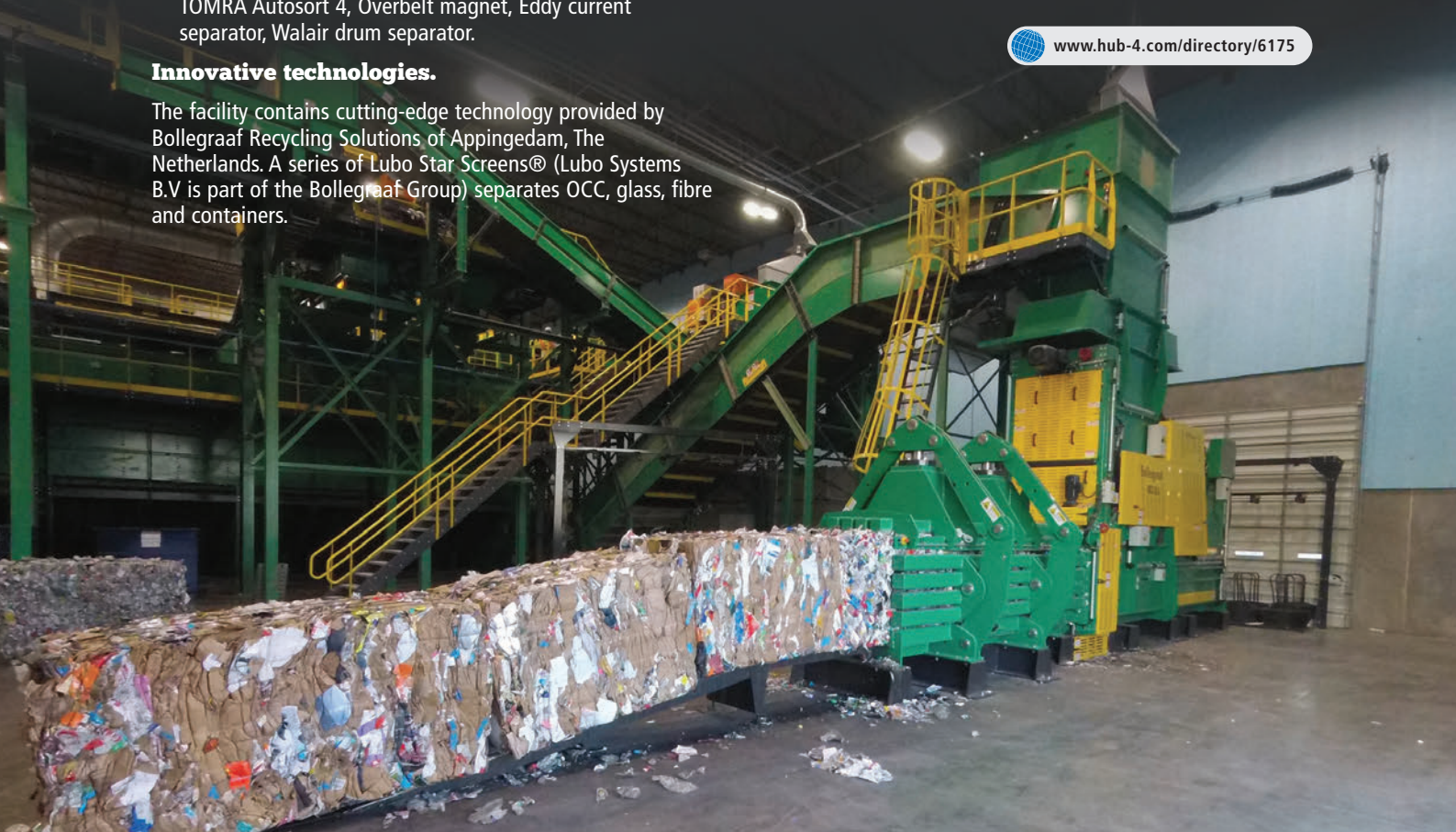
Other innovative upgrades that have been incorporated in the HBC-120S are the self-learning channel pressure, which is self-regulating control, which adapts to the material being baled in the channel, and can increase the bale weight by 10 to 20%.

The single needle system (5x1) leaves less room for residue to accumulate during the knotting process, reducing the downtime and hence an important cost reduction.

Since the needle system is vertical, the Bollegraaf baler produces stable bales and has a reduced risk of wire breakage. Whether using steel wire, PP twine or PET, the Bollegraaf Baler is highly suitable to bale even the most difficult waste streams.



www.hub-4.com/directory/6175



Sunshine Groupe Invests in ZenRobotics' AI Technology for Recycling



ZenRobotics Ltd. will deliver a robotic waste sorting system to Sunshine Groupe in Melbourne, Australia. The three-armed ZenRobotics Recycler unit (ZRR3) will be the first of its kind in Australia and it is expected to be fully operational in spring 2017.

Sunshine Groupe, founded in 1926, is a family-owned business with recycling experience in five generations. With recent investments Sunshine Groupe aims to position itself as one of Melbourne's primary waste processors.

"We believe that through changed thinking and innovative technology, wastes can be transformed into valuable resources. We will achieve this by challenging conventional waste practices and by looking for new and innovative technologies to recycle waste", says Tom Buxton, Director at Sunshine Groupe.

Through a partnership with Sustainability Victoria, Sunshine Groupe installed a material recovery facility (MRF) at their Brooklyn landfill and recovery site. The facility allows Sunshine Groupe to better identify resources from the 120,000 tonnes per annum waste stream to be repurposed and reused for other materials. A mixture of waste materials will be dropped off at the primary transfer station where it will then be processed to sort the materials into specific fractions.

After the waste has been sorted through these processes, the materials will be transferred to the state-of-the-art robotic material sorting plant. Here, the ZRR3 — a tri-station robotic gantry arm plant manufactured by ZenRobotics and supplied by Robots in Waste — will use its high precision sensors and Artificial Intelligence (AI) to sort precise and pure material types from the waste stream.



"At Sunshine Groupe, we believe in sustainability — which is why we've invested in some of the most advanced recycling technology in the world", Tom Buxton summarises.

Rising interest in robotic recycling

The Australian market looks very promising to ZenRobotics' dealer Jim Duncan from Robots in Waste.

"It is exciting for Robots in Waste to have the Sunshine Groupe project finally close to completion as there are many companies that are aware of this significant development and are watching with interest. Because of the sheer size of our country we will have people flying across the continent to see the ZRR3 in action. Such is the interest in the system", Jim Duncan, from Robots in Waste, explains.



www.hub-4.com/directory/15901

Move into metal recycling boosts R Collard's waste offering

Hampshire-based demolition and waste management company, R Collard Limited, has announced it will be opening a metal recycling facility in Wokingham. This will complement its existing waste recycling operation and expand the recycling capabilities of R Collard. Already leading the field in the recycling of construction and civil engineering throughout the South of England, these new facilities bring the processing of metal waste in-house giving the company greater control of the process.



The facility, located in Toutley Road, Wokingham, gives R Collard the capacity to recycle metal from its own in-house demolition projects, from the wastes tipped at their five Material Recycling Facilities (MRFs) and their skip-hire customers. They will now be able to manage the recycling of ferrous and non-ferrous metals including all types of aluminium and copper with equipment including a metals shredder and a baler for compressing materials ready for re-processing into new metals. Its location in Berkshire makes an ideal geographical fit with R Collard's five Licenced Transfer Stations in Eversley, Aldershot, Bramshill, Reading and Farnham.

'It is our first step into the world of metal recycling,' says Robert Collard, founder and Managing Director of R Collard Ltd, 'It is a fantastic opportunity which compliments the waste infrastructure and demolition requirements for the R Collard Group'.

R Collard's recent investment and growth by acquisition is making the company, which celebrated its 21st Anniversary in 2016 one of the South's leading construction waste operators. Its integrated materials recycling resources including a purpose-built wash plant for processing inert wastes into high-grade recycled aggregates places the company at the centre of the circular economy of the South of England. In 2016 the company handled over 365K tonnes of wastes of which over 97.5% were either recycled or processed for energy recovery.

Metals recycling is an established industry that makes a significant reduction in use of energy and virgin resources. Virtually all metals can be recycled into high quality new metal, generally to metals of equivalent quality. This added capability suits the long-term commitment of the company to the sustainable concept of closed-loop recycling and its ambition to be a major waste recycling business for southern England.



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Master Magnets Help Finnish Waste Sorting

In early 2015 Master Magnets were contacted by their Finnish dealer-Vimelco regarding a new project for a waste treatment facility processing municipal solid waste (MSW) and solid recovered fuel (SRF) in Lahti, 105km northeast of Helsinki. This new plant would be handling an input in excess of 66,000 TPA of this mixed waste and Master Magnets were asked to provide a solution for the recovery of an estimated 2700 TPA of ferrous and non-ferrous metals in the material.



The incoming material was sized into two different fractions, a 3D and 2D fraction with a size range from 20mm to 200mm. Vimelco required an Overband Magnet installed inline over the head of the conveyors for the removal of general tramp iron. A Mastermag permanent in line overband (12PIL7) was selected for the 3D fraction to work at a 300mm gap across the 1000mm wide feed belt. Once cleaned of the ferrous contaminants, the material was to be transported to a 1000mm wide eddy current separator to have the non-ferrous

metal fraction removed. The finer 2D fraction required another Overband Magnet, this time for a 250mm operating gap and a slightly wider 1250mm wide eddy current separator to accommodate the lighter density material. To further protect this ECS from fine ferrous particles, a 400mm diameter x 1000mm wide rare earth magnetic head pulley was proposed, to ensure no ferrous fragment, no matter how small could make it to the ECS system.

With both of the proposed eddy currents being fully inverter controlled, the customer has the ability to fine tune the separation, optimising the capability of the concentric rotors to retrieve the smallest of non-ferrous particles. This maximises the return by reducing unnecessary landfilling of valuable commodities.

With the feed material free of metal, it is then fed into windshifters and optical sorters to be broken down into saleable products.

In January 2016 Vimelco was successful in their tender for this significant project and Master Magnets having quoted equipment of a very high quality and with a reputation for outstanding customer service was successfully awarded the contract for all the magnetic separators.

All of the equipment was delivered in April of 2016 and subsequently installed over the following weeks by a team of sub-contractors employed by Vimelco. Throughout July and August the equipment underwent cold & hot commissioning respectively. Although Vimelco engineers were fully versed in the setting up and operation of the machinery, Master Magnets personnel were always available to provide technical assistance and information to ensure any adjustments were made in a timely manner.

The new plant is now fully operational and very quickly working towards reaching that all important payback period.



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CRS Supply Plastics Refinement Processing Plant in Atlanta

Customer: GreenMine Llc, Atlanta

GreenMine Llc are a leading recycling company based in Atlanta facilitating Georgia and the surrounding states. Their existing facilities processed mixed dry recyclables and with a further focus now on baled plastics the company decided to expand with a New Plastics Refinement Processing Plant.

The sourced material comes from primary recycling processors whose main focus is retrieving metals, wood, paper & mixed plastics. The material is a commodity, which they process further into different plastics streams & colours including HDPE & Natural HD, PET, PP & Aluminium.

Solution

A unique bespoke design was completed for GreenMine in Atlanta to ensure recycled material throughput was maximised, cleaner material streams achieved and hence a more effective separation.

After extensive time spent on site with GreenMine to understand their challenges CRS designed a custom solution where the bales of plastic are fed into the plant on a steel feeder where they are initially opened using a shredder.

From here the material is screened using a 620 Trommel to remove unwanted dirt which then passes under magnets to recover metals followed by an eddy current machine to recover aluminium.

At this point the material is now clean & ready for further plastic separation. The material begins its refinement process by passing through a series of 5 high end Optical Sorting machines. Each machine picks a specific type of plastic and then transfers it to a storage bunker which stores material until ready for baling.

The Unisort Machines take plastic recycling to a new level of sorting and separation for resource recovery by using sophisticated ways to recover plastics and packaging for re-use, using hyper-spectral imaging, near-infrared and colour sorting.

The introduction of mechanised picking using state of the art machines replaced the need for large numbers of manual labour to produce the same throughput.



Results & Success

"After extensive research on Suppliers we decided to partner with CRS for an innovative solution. We are now creating valuable materials by refine processing, increasing customer profitability through higher recovery and reducing operational costs"

Adam Glasgow, GreenMine Llc, Atlanta

Sean Conlon, Managing Director of CRS NI Ltd commented "This was an exciting project with a tight deadline which resulted in significantly reducing manual labour and increasing production for GreenMine"

To find out how CRS can help maximise your waste return, or for further information please contact marketing@crsni.com or Tel:028 807 60496



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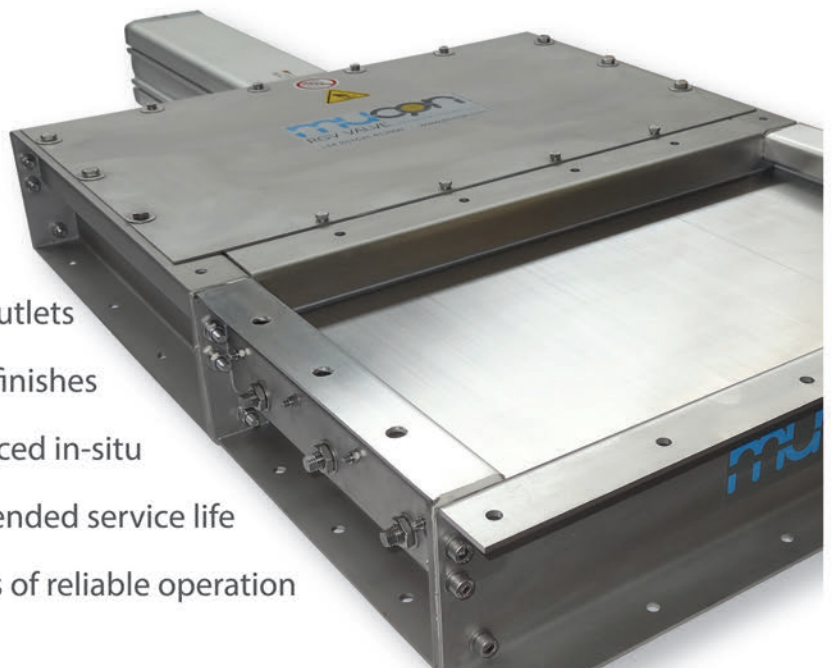
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Waste Systems Ltd Launch Washing range with Hydro-X-Tract

Waste Systems have added a new line in their product offering to join the industry changing Max-X-Tract and Proflow units. Designed to separate contaminated materials such as trommel fines, glass compost and a host of other co-mixed material, the unit is the final jigsaw in the separation of difficult materials.

It has been recognised that in the process of separation of co-mixed materials the first stage is to remove the minus sized fine materials leaving a typical plus 8mm to 100mm using Proflow screens. After air separation using Max-X-Tract the resulting heavies contain material which if further processed would have an end value.

After market evaluation and customer consultation the Hydro-X-Tract was developed and tested to enormous success.

The semi mobile unit can effectively separate wash and remove silts in one compact unit with very low water requirements and with its own built in silt recovery unit. No contaminated water is released to the environment and as the unit is mobile can be operated under current permissions.

The washed products have had contamination removed and can be marketed with a resulting revenue stream.

Used in conjunction with the Proflow units most difficult materials will now be able to be processed and a solution of too many operators' problems solved.

The unit can be easily incorporated into existing processing setups just needing a power and water supply before being operation in minutes which is not something the conventional wash plants which may take weeks to install need constant supervision and maintenance with high running costs. A lot of wash plants on the market are variations of sand and gravel plants with perhaps the introduction of a trash screen but in used the high level of contamination can make these inoperable. The Hydro-X-Tract was designed for waste with all the features included to allow for adjustment for variation in waste types.

Aimed at mid to large scale operators the units can be married to other Hydro-X-tracts to process a range of products and can recover sands from minus fractions where feasible to do so.

Operators are finding the compact nature of the unit ease of use and production of quality products makes the Hydro-X-Tract a useful tool in dealing with waste streams that they would have perhaps avoided but now have confidence that they now can process and achieve a product and gain a revenue stream as well as reducing landfill costs.

To get in touch with your local country contact, please email info@wastesystems.eu +44 7545502897

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RUD Lifting Equipment for the safe handling of heavy plant & injection moulding tools

RUD Chains is a leading manufacturer of lifting and lashing equipment that helps guarantee ultimate safety when lifting and handling heavy loads. Their diverse product range offers over 600 lifting and lashing points for bolting and welding covering a working load capacity range from 0.6-250 tonnes.

The demand for loads to swivel and pivot safely during the handling process of a project is essential. Loads can easily be damaged and lifting systems can be considerably overloaded. Mould and die manufacturers are prime examples of this, when moulds or dies need to be flipped and handled the lifting points they use need to swivel and pivot at the same time.

The direction of the pull when undertaking heavy lifts that need to swivel and rotate can have a major impact on the working load limit of the standard eyebolt, which can create a safety breach. RUD lifting equipment is often used for the handling of heavy plant and injection moulding tools due to the fact that a selection of their lifting points can safely lift, swivel and pivot items under full loads. RUD's lifting points adjust to the direction of the pull to allow full engagement of the bolt, resulting in a safe lift.

RUD's NEW ICE-LBG SR Super Rotation Load Ring offers the ultimate solution for lifting, turning & flipping at high working loads. It rotates 360° in all directions under load with an innovative ball bearing technology which offers a smooth rotation.

The double ball bearing technology means that lifting, turning or rotating under full loads, vertically or horizontally can now be done safely without any chance of the bolt opening mid lift. The ICE-LBG SR therefore offers an ultimate safety factor to the user and the equipment being handled.

The STARPOINT VRS is another example of RUD's lifting equipment which is ideally suited to handling of plant and injection moulding tools. It has been designed to adjust to the direction of the pull and rotates 360°, meaning the working load limit is therefore always at the direction of the load. The STARPOINT removes the chance of bent eyes, backed out threads, or over-tightening which would cause unnecessary stress on the stem.

The PowerPoint Star is an extremely robust lifting point which has the ability to pivot 230° and rotate 360° which allows the lifting and turning of goods to run safely and smoothly, as well as reducing costs to potentially damaged tools.

The forged safety latch protects against lateral bending and the thickened tip of the hook helps prevent handling malpractices and resists bending, therefore delivering an exceptional safety feature when lifting and handling heavy goods.

For ultimate safety lifting and handling heavy plant and injection moulding tools, RUD lifting equipment offers the perfect solution.



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BF90.3 S4

Produced and patented, the BF90.3 was the first crusher bucket in the world ever made.

Designed to resist the most challenging conditions on any site, the BF90.3 - extremely compact and versatile - has been updated and made more powerful over the years. Suitable for all crushing operations, even the most challenging, it maintains the same results in terms of performance with all types of inert material.

In particular, exactly one year on from the last update, this model has been optimised to allow:

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- Increased options for the regulation of materials in output.
- A reduction in standard maintenance time thanks to an integrated centralised greasing system.
- Increased resistance and performance, even in the most extreme operational conditions, thanks to higher levels of power and the strengthening of parts and sections subject to the most stress and wear.

"Revolution and innovation are not static factors, but instead present a continuous challenge for improvement." These are the words of DIEGO AZZOLIN, head of production at MB, who, every day, together with his team, works to offer a range of latest-generation products with unmatched performance.

MBs RESEARCH and DEVELOPMENT department has in fact always aimed to raise the level of clients' expectations and move the potential of their machines towards new goals. Furthermore, it is thanks to the suggestions of clients who take advantage and exploit as much as possible the performance of MB products in the widest range of applications that MB Crusher studies and updates its machinery. Because the strength of MB lies in the satisfaction of its clients.



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May 17



PLANTWORX Exhibition Preview

WASTE Exhibition Preview

QUARRYING - Dump trucks, excavators & wheeled loaders. Tyres and tyre chains, wheel washing equipment.

RECYCLING - Aggregate recycling.

BULK HANDLING - Conveyors and elevators, feeders, chutes, hoppers and silos.

Editorial copy deadline 5th May 2017

Advert copy deadline 15th May 2017

July 17



STEINEXPO Exhibition Preview

RWM Exhibition Preview

QUARRYING - Track mounted conveyors, stockpiling conveyors, mobile radial stockpilers, tracked feeder stackers. Dust Suppression and Control.

RECYCLING - MRF's / Recycling Plants including feeders, trommels, shredders, picking stations, robotic separation, air-separation, ballistic separation, magnets, flip-flow screens, balers, and fines clean-up.

BULK HANDLING - Gantry cranes, lifting and lashing, chains, storage solutions.

Editorial copy deadline 5th July 2017

Advert copy deadline 15th July 2017

September 17



BULKEX Exhibition Preview

QUARRYING - Turnkey bespoke static crushing and screening plant. Wear parts and wear protection.

RECYCLING - Material handlers, shredders and associated processes.

BULK HANDLING - Storage & handling, level measurement & control.

Editorial copy deadline 5th September 2017

Advert copy deadline 15th September 2017

November 17

QUARRYING - Bitumen, asphalt production plant, burners and other equipment. Concrete technology.

RECYCLING - Mobile equipment for the recycling industry.

BULK HANDLING - Turnkey bulk materials handling systems and associated products.

Editorial copy deadline 5th November 2017

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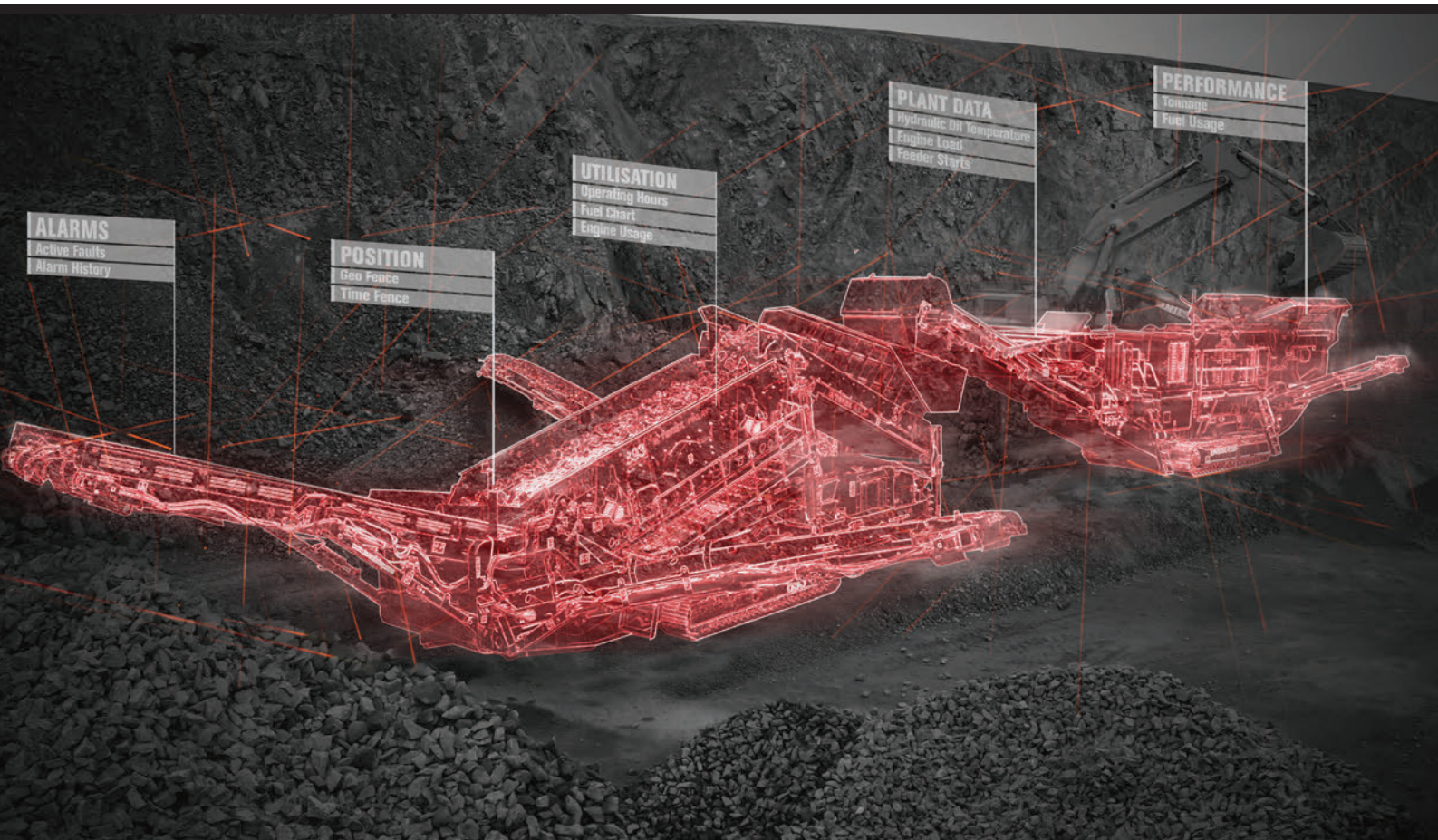


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